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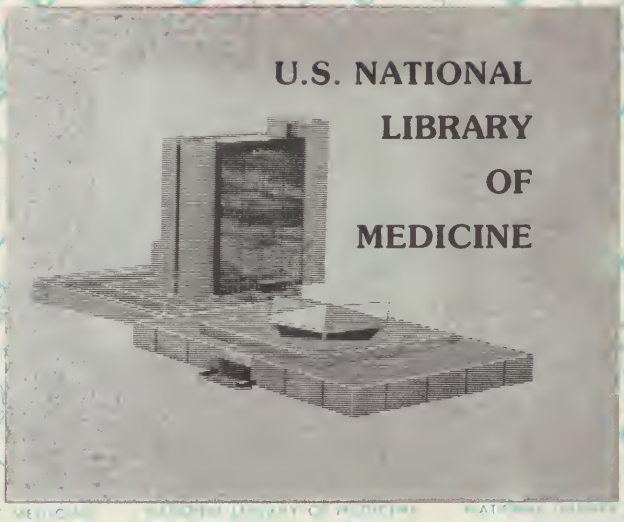
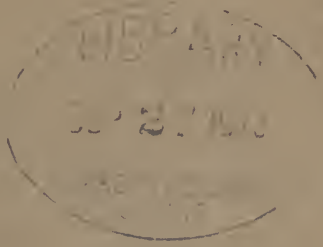


Workmen's Compensation Acts in the United States

The Medical Aspect



Research Report Number 61

National Industrial Conference Board
NEW YORK

National Industrial Conference Board

10 EAST 39TH STREET, NEW YORK

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WORKMEN'S COMPENSATION ACTS IN THE UNITED STATES

The Medical Aspect

Research Report Number 61

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Foreword

The first research report published by the National Industrial Conference Board in April, 1917, discussed the legal questions involved in the administration of workmen's compensation laws in the United States. At that time the legal structure and administration of these laws occupied first place in their consideration. The experience with the medical questions involved in them was so limited that they had not assumed the importance that now attaches to them. The importance of these questions has been emphasized largely by the inclusion of diseases of occupation in later revisions of the laws, and also by the granting of compensation for diseases having only a casual and sometimes remote connection with the occupation or with the original injury. The needed medical experience is now available in the records of decisions of industrial boards and commissions and of the courts. These decisions have been carefully studied and the principles and practices developed therein have been analyzed in the present report. The provisions of the workmen's compensation laws dealing with medical and related questions have also been analyzed, so that this report gives in comparable form the legal provisions and the interpretations which have been placed upon them by commissions and courts.

Some of these questions have already been discussed in a limited way, but this is the first comprehensive study that has been undertaken and, as such, brings together important facts not heretofore available in convenient form. No attempt has been made to offer criticisms of the laws or decisions, but it is believed that, on the basis of this large body of facts, constructive criticism of and amendments to existing laws, particularly those sections dealing with medical problems, can be more intelligently made. It is hoped that a study of this report by those most interested will afford constructive suggestions to legislatures and other bodies having the administration of these laws under their control.

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Workmen's Compensation Acts in the United States

The Medical Aspect

INTRODUCTION

Workmen's compensation laws in the United States date from 1911. The first laws enacted in some states were declared unconstitutional and not until that year was a law passed that stood the legal tests as to constitutionality

As Table 1 indicates, workmen's compensation laws are now in effect in forty-two states. Arkansas, Florida, Mississippi, North Carolina and South Carolina have not yet passed such laws, while the compensation law enacted by the legislature of Missouri was defeated by referendum.

The passage of these laws nullified the provisions of the employer's liability laws which had previously been upon the statute books of many states. It was felt that these older laws, including rights to action under the common law, did not adequately safeguard the interests of an employee who suffered an industrial accident, and the compensation laws which displaced them were intended to place definitely upon the employer the responsibility for the care of those injured in his employ, and also to provide a definite measure of the employer's liability for injuries suffered while in his employ. In the majority of states special boards or commissions were created to administer these laws, while in a few states the courts are charged directly with this responsibility.

Every case arising under these laws involves medical questions, either immediately or ultimately. Regardless of the legal or administrative problems that may be involved in a compensation case, the medical problem is one of the first to be encountered and one of the most important to settle in a manner satisfactory to all.

Early in the history of compensation legislation scant attention was paid to the medical questions involved. Apparently

TABLE 1: DATE OF ENACTMENT OF WORKMEN'S COMPENSATION LAWS IN THE UNITED STATES

(National Industrial Conference Board)

State	Approved	Effective	State	Approved	Effective
Washington	Mar. 14, 1911	Oct. 1, 1911	Maryland	Apr. 16, 1914	Nov. 1, 1914
Kansas	Mar. 14, 1911	Jan. 1, 1912	Louisiana	June 18, 1914	Jan. 1, 1915
Nevada	Mar. 24, 1911	July 1, 1911	Wyoming	Feb. 27, 1915	Apr. 1, 1915
New Jersey	Apr. 4, 1911	July 4, 1911	Indiana	Mar. 8, 1915	Sept. 1, 1915
California	Apr. 8, 1911	Sept. 1, 1911	Montana	Mar. 8, 1915	July 1, 1915
New Hampshire	Apr. 15, 1911	Jan. 1, 1912	Oklahoma	Mar. 22, 1915	Sept. 1, 1915
Wisconsin	May 3, 1911	May 3, 1911	Vermont	Apr. 1, 1915	July 1, 1915
Illinois	June 10, 1911	May 1, 1912	Maine	Apr. 1, 1915	Jan. 1, 1916
Ohio	June 15, 1911	Jan. 1, 1912	Colorado	Apr. 10, 1915	Aug. 1, 1915
Massachusetts	July 28, 1911	July 1, 1912	Pennsylvania	June 2, 1915	Jan. 1, 1916
Michigan	Mar. 20, 1912	Sept. 1, 1912	Kentucky	Mar. 23, 1916	Aug. 1, 1916
Rhode Island	Apr. 29, 1912	Oct. 1, 1912	South Dakota	Mar. 10, 1917	June 1, 1917
Arizona	June 8, 1912	Sept. 1, 1912	New Mexico	Mar. 13, 1917	June 8, 1917
West Virginia	Feb. 22, 1913	Oct. 1, 1913	Utah	Mar. 15, 1917	July 1, 1917
Oregon	Feb. 25, 1913	July 1, 1914	Idaho	Mar. 16, 1917	Jan. 1, 1918
Texas	Apr. 16, 1913	Sept. 1, 1913	Delaware	Apr. 2, 1917	Jan. 1, 1918
Iowa	Apr. 18, 1913	July 1, 1914	Virginia	Mar. 21, 1918	Jan. 1, 1919
Nebraska	Apr. 21, 1913	Dec. 1, 1914	North Dakota	Mar. 5, 1919	Mar. 5, 1919
Minnesota	Apr. 24, 1913	Oct. 1, 1913	Tennessee	Apr. 15, 1919	July 1, 1919
Connecticut	May 29, 1913	Jan. 1, 1914	Alabama	Aug. 23, 1919	Jan. 1, 1920
New York	Dec. 16, 1913	July 1, 1914	Georgia	Aug. 17, 1920	Mar. 1, 1921

it was the expectation of the framers and early administrators of these laws that cases coming thereunder could be treated as any other cases requiring the services of a physician. The economic questions bound up with these cases were given little consideration, as is indicated by the fact that in some states the amount of medical fee that could legally be collected for treating compensation cases was $25, and the length of time for which such service could be supplied was not more than two weeks.

Experience soon showed, however, that the results obtained under such measures were not satisfactory. Injured workers were not getting proper medical treatment, and disability was consequently prolonged. This resulted in increased compensation payments, and frequently increased the amount of medical attention required, either at the expense of the worker or of the community.

Such a situation may be explained on the ground that the enactment of compensation laws introduced a new factor into the industrial order, in that it made the employer directly responsible for injuries occurring to workers while in his employ. The experience needed to make constructive adjustments to this new principle was lacking and could be obtained only by observing the operation and effect of such legislation. A period

has now elapsed sufficiently long to enable those who make the laws and those who administer them to obtain a better view of the problem. Such experience has shown the advisability of greatly increasing both the time and amount of medical service allowed, and legal provisions in this regard have been altered, until in 1923 in twenty states such service may be unlimited either as to time or amount.[1]

It was with a realization of the importance of such medical questions as these involved in the operation of the workmen's compensation laws that the present investigation was undertaken. Certain problems, common to all or nearly all the compensation laws now in force, were presented for consideration; particularly the interpretations that have been placed by different state officials upon identical or nearly identical provisions of the laws. Great variations were found, not only in the rulings and decisions of the boards and courts administering the laws in different states, but also among those of the courts which were called upon in appealed cases to interpret and clarify the law.

Such diverse board and court decisions have been the groundwork upon which the interpretation and administration of the laws have been built, with the result that it is not unusual to find opposite practices prevailing in adjacent states. This has led to great confusion and difficulty.

In the succeeding pages the present practices of the various boards and commissions in administering the medical aspects of the compensation laws will be discussed, and the more important court decisions bearing upon medical problems will be cited and reviewed. Rulings and decisions of the United States Compensation Commission have been omitted and the amendments to the laws which have been passed by legislatures in 1923, many of which are still in session, have not been included in this report, inasmuch as they have had no bearing upon the past decisions of commissions and courts which are considered here.

In the preparation of this report the state industrial boards and compensation commissions have given valuable assistance, acknowledgement of which is here made. Various insurance organizations have also contributed to the material here presented.

[1] California, Connecticut, Idaho, Indiana, Louisiana, Maryland, Massachusetts, Michigan, Nebraska, Nevada, New Jersey, New York, North Dakota, Oregon, Texas, Utah, Virginia, Washington, Wisconsin, Wyoming. See table, p. 57.

Throughout this study, the Conference Board of Physicians in Industry has given valuable assistance and the following Advisory Committee of that Board studied the manuscript of the report with especial care:

Dr. William B. Fisk, Chief Surgeon, International Harvester Company, Chicago, Illinois.

Dr. C. E. Ford, Medical Director, General Chemical Company, New York City.

Dr. Loyal A. Shoudy, Chief Surgeon, Bethlehem Steel Company, Bethlehem, Pennsylvania.

Dr. Frank L. Rector, Secretary of the Conference Board of Physicians in Industry and a member of the research staff of the National Industrial Conference Board, organized and outlined the investigation, which was carried on under his immediate direction.

I

DEFINITION OF EMPLOYER'S LIABILITY

Liability under American workmen's compensation laws is created by a standardized phrase, taken bodily from the English act and incorporated in the majority of our state laws—"personal injury by accident arising out of and in the course of employment." The courts, in attempting to define this liability, have varied widely in their opinions, depending largely upon whether a strict and literal or broad and liberal interpretation of the law has been made. In some states, moreover, a variation in the phrasing of this clause results in vital differences in interpretation.

"Personal Injury by Accident"

In order that a disability be termed "personal injury" it is not necessary that there be a blow or sudden physical contact with the body, producing violence thereto. The Massachusetts Supreme Judicial Court,[1] in sustaining an award to a workman blinded from inhaling poisonous gas, held that

> "The preponderance in recent years of actions grounded upon physical violence has tended to emphasize the aspect of injury which depends upon visual contact or direct lesion. But that is by no means the exclusive significance of the word either in common speech or in its legal use."

Compensation for a nervous breakdown of a previously healthy woman worker as a result of a cry of "fire," was awarded by the New York Supreme Court[2] on the ground that the fright was an accident and the nervous breakdown the resulting injury. The limits of a personal injury are well stated in a Massachusetts case.[3] Here a workman after twenty-five years of service became disabled in his trade as a cigar maker because of neurosis arising from the stooping position called for by his work. The Supreme Judicial Court, in reversing the award of the Industrial Accident Board, said:

> "Poisoning, blindness, pneumonia, or the giving way of heart muscle, all induced by the necessary exposure or ex-

[1] *In re Hurle.* 104 N. E. 366.
[2] *London* v. *Casino Waist Co.* Affirmed, 181 App. Div. 962. New York. Department of Labor. Special Bulletin No. 97, p. 135.
[3] *In re Maggelet.* 116 N. E. 972.

ertion of the employment, fall well within recognized classes of personal injuries. On the other hand the gradual breaking down or degeneration of tissues caused by long and laborious work is not the result of a personal injury within the meaning of the act. A person may exhaust his physical or mental energies by exacting toil, and become unfit for further service, but he is not because of this entitled to compensation, for the reason that this condition cannot fairly be described as a personal injury. The disease must be, or be traceable directly to, a personal injury peculiar to the employment. A nervous condition dependent upon poor posture of the body in our opinion does not constitute a commonly known and well recognized personal injury consequent upon employment."

The same court[1] held that anything which causes incapacity for work and thereby impairs the ability to earn wages is a personal injury under the workmen's compensation act. Generally classed as personal injuries are all the consequences of an accident, which may also include resulting infection or disease, like traumatic pneumonia, or an aggravation or acceleration of a pre-existing disease.

"Accident" has been defined in an English case[2] as "an unlooked-for mishap, an untoward event which is not expected or designed," and this definition is now in common use by American courts as a test of the accidental nature of an injury.

Thus it is evident that the element of time enters into the determination whether a particular injury is accidental or not. If the injury develops slowly it can hardly be unexpected on the part of the injured employee. The phrase "by accident" would therefore exclude liability for occupational diseases, which are disabilities not the result of accident but of gradual development and reasonably to be expected as a hazard of the employment. In the Massachusetts act the words "by accident" have been omitted and occupational diseases are therefore compensable in that state. Seven other states[3] make specific provision to cover occupational disease; one of them, Minnesota, qualifies the phrase "personal injury by accident" by adding that disability resulting from occupational disease shall be treated as the consequence of an accident. Occupational diseases are discussed at length elsewhere in this report.

As stated in a Michigan opinion:[4]

[1] *In re Johnson.* 104 N. E. 735.
[2] *Fenton* v. *Thorley.* 19 T. L. R. 684
[3] Connecticut, California, Illinois, Minnesota, New York, Ohio, Wisconsin.
[4] *In re Harry Hart.* Michigan. Industrial Accident Board. Workmen's Compensation Cases. July, 1916. p. 338.

"The word 'accident' is generally used to designate the cause and the word 'injury' is used to designate the effect. The effect of the accident (which is the injury) may be and generally is immediate, but in a considerable number of cases the effect of the accident (which is the injury) does not immediately follow in point of time, but develops and produces disability at a later time, in some instances weeks or months after the accident."

It is therefore important, in cases where there is an interval between the accident and development of the disability, that the proximate cause of the disability be traced to the accident. This is a matter of fact to be determined by the tribunal having jurisdiction. It is, of course, necessary that the injury for which compensation is claimed be due to the accident. Many claims have been dismissed because of failure on the part of the injured worker or his representatives to establish a causal relation between the disability and the accident.

The effects of an accident may be far-reaching, but the employer's liability therefor continues so long as the chain of causation is not broken. Thus compensation was allowed by the Pennsylvania Supreme Court[1] where an employee was thrown violently by an electric shock and as a result of the impact broke a rib. The fractured rib caused the development of pleurisy, during which the employee, in a state of delirium, committed suicide. It was held that a complete chain of events, each following as a direct consequence of the original injury, gave death as a proximate result of the original injury.

Compensation has been denied where a new agency intervened to prolong or aggravate the injury. Such was the decision in a Wisconsin case.[2] The evidence in this case established that the claimant in the course of his employment as a tinsmith cut his hand. Medical attention was provided and the wound was practically healed when he engaged in a boxing match. After this his injury grew worse, became infected and finally resulted in the loss of bones of the hand and wrist, incapacitating him from following his trade. The Supreme Court sustained the decision of the Industrial Commission that the accident was not the cause of the ultimate disability.

"Arising Out of and in the Course of Employment"

"In the course of employment" refers particularly to the time and place and circumstances under which the accident takes

[1] *Lupfer* v. *Baldwin Locomotive Works.* 112 Atlantic 458.
[2] *Kill* v. *Industrial Commission of Wisconsin.* 152 N. W. 148.

place. Liability under it requires that there exist a contractual relation of employer and employee and that the employee be duly engaged in the services required by such employment. As is well stated in a New Jersey decision:[1]

> "an accident arises 'in the course of the employment' if it occurs while the employee is doing what a man so employed might reasonably do within the time limit during which he is employed, and at a place where he may reasonably be during that time."

The compensation acts of a few states do not include the expression "arising out of," but simply require that the accidental injury occur in the course of the employment. In Ohio, the Supreme Court[2] has read the omission into the law, saying:

> "It was plainly the intention of the framers of the amendment, and of the statutes to provide compensation only to one whose injury was the result of or connected with the employment, and would not cover any case which had its cause outside of and disconnected with the employment, although the employee may at the time have been actually engaged in doing the work of his employer in the usual way."

The Supreme Court of Washington[3] has pointed out that under the law of that state, which omits the phrase "arising out of," it was not necessary that an injury should arise out of the employment. The Pennsylvania act omits the same phrase and the courts of that state have held it to be sufficient that the injury occur in the course of employment.

According to the Massachusetts Supreme Judicial Court,[4] an injury

> "arises 'out of' the employment, when there is apparent to the rational mind, upon consideration of all the circumstances, a causal connection between the conditions under which the work is required to be performed and the resulting injury. Under this test, if the injury can be seen to have followed as a natural incident of the work, and to have been contemplated by a reasonable person familiar with the whole situation as a result of the exposure occasioned by the nature of the employment, then it arises 'out of' the employment. But it excludes an injury which cannot fairly be traced to the employment as a contributing proximate cause, and which comes from a hazard to which the workmen would have been equally exposed apart from the employment. The causative danger must be peculiar to the work, and not common to the neighborhood. It must be incidental to the character of the business, and not independent of the re-

[1] *Bryant* v. *Frissell.* 86 Atlantic 458.
[2] *Fassig* v. *State.* 116 N. E. 104.
[3] *Stertz* v. *Industrial Insurance Commission.* 158 Pacific 256.
[4] *In re McNicol.* 102 N. E. 697.

> lation of master and servant. It need not to have been foreseen or expected, but after the event it must appear to have had its origin in the risk connected with the employment, and to have flowed from that source as a rational consequence."

The court, after stating this definition of the phrase "arising out of and in the course of employment," found that the injuries sustained by the deceased at the hands of a quarrelsome and intoxicated fellow worker arose out of the employment because the condition of the assailant, known to the superintendent, constituted a menace to all fellow employees, under which they were required to work.

Thus it will be seen that the phrase "arising out of and in the course of employment" pertains particularly to the origin and cause of the accident but does not relate to the nature and extent of injury nor the consequences resulting therefrom. The phrase becomes important in determining such injuries as sunstroke, lightning and freezing where the discussion revolves around the question, "Was the injury caused by the employment, or by conditions to which the community as a whole was exposed?" Such injuries are discussed elsewhere in this report.[1]

In general, commissions and courts have been generous in interpreting this phrase, and where a causal connection between the injury and the employment has been found to exist, compensation has been awarded.

[1] P. 147 ff.

II

REQUIREMENTS FOR REPORTING ACCIDENTS

In all except four states[1] the workmen's compensation laws prescribe the manner in which reports of accidents shall be made by employers to the industrial commissions. The requirements cover, (1) the period following the accident within which reports must be made; (2) the nature of the injury to be reported; and (3) the penalties for neglect or refusal to report.

General provisions as to the contents of the report cover such items as name, character and location of employer's business; name, age, sex, occupation and wage of the injured; date and hour of occurrence, nature and cause of injury, and such other information as the commissions may require. Supplemental reports may be required from the employer, employee, physician or hospital, as the case may demand.

All reports must be made on blanks furnished by the commissions. When the time limit is indicated in hours, the statutes provide that Sundays and holidays are excepted.

The essential features of the provisions regarding reporting of industrial accidents are summarized in Table 2.

TABLE 2: PROVISIONS IN WORKMEN'S COMPENSATION LAWS REGARDING REPORTS OF INDUSTRIAL ACCIDENTS REQUIRED FROM EMPLOYERS

(National Industrial Conference Board)

State	Time	Nature of injury	Penalty for neglect or refusal
Alabama.....	15 days	Injuries disabling beyond 14 days. Supplemental report upon termination of disability or if disability extends beyond 60 days. Employer also to report within 10 days after settlement of any case the details of such settlement.	Hard labor not more than 1 year and fine not more than $500.
California.....	As Board requires.	Disabilities of one day or more or requiring other than first aid treatment. Fatalities must be reported by telephone or telegraph. Attending physician as well as employer to report.	Not less than $10 and not over $100.

[1]Arizona, Kansas, Louisiana, New Hampshire.

TABLE 2: PROVISIONS IN WORKMEN'S COMPENSATION LAWS REGARDING REPORTS OF INDUSTRIAL ACCIDENTS REQUIRED FROM EMPLOYERS—*continued*

(National Industrial Conference Board)

State	Time	Nature of injury	Penalty for neglect or refusal
Colorado.....	10 days	All accidents resulting in personal injury.	
Connecticut...	Weekly	Includes injuries causing incapacity of 1 day or more, also any claims for compensation.	Not more than $100
Delaware.....	10 days	Report time, nature, and cause of injury and any other information required by the Board.	Not less than $10 nor more than $50.
Georgia.....	10 days	Injury requiring medical treatment or causing more than 14 days absence from work. Supplemental report upon termination of disability.	Not over $250 each offense.
Idaho.....	48 hours	Absence from work one day or more. Supplemental report on termination of disability and if disability extends beyond 60 days.	Not more than $500
Illinois.....	At once Monthly	For fatal injuries. Between 15th and 25th for disabilities extending beyond one week. In case of permanent injury report to be made as soon as extent of disability has been determined.	Not less than $10 nor over $500.
Indiana.....	1 week	Injuries causing absence from work for one day or more. Report also termination of disabilities and a supplemental report if disability extends beyond 60 days.	Not more than $25 each offense.
Iowa.....	48 hours	Absence from work for one day or more. Supplemental report on termination of disability or if disability extends beyond 60 days.	Not more than $50 each offense.
Kentucky.....	1 week	Absence from work for one day or more. Supplemental report on termination of disability or if disability extends beyond 60 days.	Not more than $25 each offense.
Maine.....	Promptly	All accidents; and also report whenever employee resumes employment together with amount of wages earned before and after accident; also to report final settlements.	$10 for each day of wilful neglect or refusal.
Maryland.....	At once	All accidents compensable under the act.	Not over $50.
Massachusetts.	48 hours	All injuries. Also supplemental report upon termination of disability and also when disability extends beyond 60 days.	Not over $50.
Michigan.....	8 days	All injuries in course of employment.	Not more than $50 each offense.

TABLE 2: PROVISIONS IN WORKMEN'S COMPENSATION LAWS REGARDING REPORTS OF INDUSTRIAL ACCIDENTS REQUIRED FROM EMPLOYERS—*continued*

(National Industrial Conference Board)

State	Time	Nature of injury	Penalty for neglect or refusal
Minnesota....	48 hours 7 days	For fatal or serious accident. For disabilities incapacitating more than remainder of day, shift or turn on which injury was sustained. Physician, if requested by Commission, to report all facts within his knowledge within ten days after such request.	$50 each failure.
Montana.....	As Board requires.	All injuries arising out of and in the course of employment.	
Nebraska.....		Reports to be made in manner and form prescribed by Commission.	
Nevada.....		Reports to be made in manner and form prescribed by Commission.	Not less than $50 nor over $200.
New Jersey....	2 weeks 4 weeks	Fatal injury. Injuries preventing return to work within two weeks after accident.	$50 each offense.
New York.....	10 days	All injuries in course of employment	Not over $500.
North Dakota.	1 week	All injuries in course of employment.	Not over $500.
Ohio.....	1 week	All injuries in course of employment.	Not over $500.
Oklahoma.....	10 days	(or reasonable time thereafter). Any accident resulting in personal injury.	Not over $500.
Oregon.....	At once.	Any accident. Report must state whether accident arose out of or in course of employment.	$100 each offense.
Pennsylvania..	7 days 30 days	After knowledge of an accident required by subscribers to State Fund to be relieved of liability. All employers must report any personal injury caused by accident to Department of Labor and Industry.	$100.
Rhode Island..	48 hours 3 weeks	In accidents resulting in death. After accident when employee is incapacitated from earning wages for a period of two weeks. Supplementary report at the termination of disability.	Not over $50 each offense.
South Dakota.	48 hours	All injuries in course of employment. Upon termination of disability and if disability extends beyond 60 days a supplemental report required.	Not more than $25.
Texas.....	8 days	Injury causing more than one day's absence from work. Supplemental report upon termination and if disability extends beyond 60 days.	Not more than $1000.

TABLE 2: PROVISIONS IN WORKMEN'S COMPENSATION LAWS REGARDING REPORTS OF INDUSTRIAL ACCIDENTS REQUIRED FROM EMPLOYERS—*continued*

(National Industrial Conference Board)

State	Time	Nature of injury	Penalty for neglect or refusal
Tennessee....	1 week	All accidents arising out of and in course of employment. Physicians required to report to Commission as to condition or treatment of employee.	Not over $500 each offense.
Utah.....	1 week	All accidents arising out of and in course of employment. Physician required to report to Commission as to treatment or condition of employee.	Not over $500 each offense.
Vermont.....	72 hours	All injuries in course of employment causing 1 day or more absence. Final report on termination of disability. Supplemental report when disability extends beyond 60 days.	Not more than $25.
Virginia.....	10 days	Injuries causing more than 7 days absence. Supplementary report on termination of disability and also if disability extends beyond 60 days.	Not over $25 each offense.
Washington...		Employer not required to report accident. Record of accident comes from employee's application for compensation, setting out the facts accompanied by physician's certificate. Physician must report to Industrial Insurance Department within 10 days of treatment, showing condition of injured at time of treatment, description of treatment given and probable duration of injury.	
West Virginia..		Commissioner shall prepare report blanks and furnish to employer who will be obliged to complete reports and return same.	Not more than $2,500.
Wisconsin.....	1 day 8 days Monthly	Accidents resulting in death, reporting in detail within 8 days after an accident or the beginning of disability from occupational disease. On the first day of each month a supplementary report. Final report when final payment of compensation is made, to be accompanied in certain cases by report from a physician.	Compensation may be increased 15%.
Wyoming.....	20 days	Any accident.	Not exceeding $500

III

NOTICE OF INJURY AND CLAIM

Notice of Injury—When Given

In all except six states[1] the compensation laws are specific as to the length of time within which the injured party must notify his employer that he has suffered an accident. This time varies from immediately to six months. In two states[2] the law specifies that the injured employee must notify his employer "forthwith" as to any injury which he may have received. The laws of twelve other states[3] provide that this notice must be given "as soon as practicable." In Colorado this period is two days; in Alabama five days, and in Kansas and Maryland, ten days. The time limit in six states[4] is fourteen days. In Iowa it is fifteen days. In seven states[5] a thirty-day period is specified; in two states[6] a sixty-day period, while in Michigan and Louisiana, the periods are three months and six months respectively.

The Maryland law has the added provision that the time of filing notice of injury may be extended to thirty days if the injury results in death. In certain of the other states[7] the stipulated period may be extended to thirty or ninety days or longer in special cases, largely dependent upon the physical or mental condition of the injured party or upon his ignorance of the law's provision.

Notice of Injury—to Whom Given

In all but five states[8] the laws specify that the notice of injury must be given to the employer or compensation commission. In five states[9] the law provides that notice may be served upon the employer or his agent or representative, while in three states[10] the industrial commission must be notified, in addition

[1]Ohio, Oregon, Utah, Washington, West Virginia, Wyoming.
[2]Connecticut, Nevada.
[3]Georgia, Idaho, Illinois, Indiana, Kentucky, Massachusetts, Nebraska, New Hampshire, South Dakota, Tennessee, Vermont, Virginia.
[4]Arizona, Delaware, Minnesota, New Jersey, New Mexico, Pennsylvania.
[5]California, Maine, New York, Oklahoma, Rhode Island, Texas, Wisconsin.
[6]Montana, North Dakota.
[7]Alabama, Delaware, Illinois, Iowa, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New Mexico, Rhode Island, South Dakota, Tennessee, Texas, Virginia.
[8]Minnesota, Ohio, Oregon, West Virginia, Wyoming.
[9]Arizona, Indiana, Iowa, Montana, Utah.
[10]New York, North Dakota, Oklahoma.

to the employer's notification. In Washington the law provides that the commission must be notified of all injuries inasmuch as all the provisions for care and payment of compensation rest with the commission.

Notice of Claim

Except in Utah and Wyoming the compensation laws are definite in their provisions as to time limits within which claims for compensation must be filed. With the exception of Arizona, in which the notice of injury carries with it a claim for compensation and must be filed within two weeks following the injury, the limitations do not apply to claims until from two months to two years have elapsed since the accident.

In North Dakota claims must be filed within sixty days. In four other states[1] the limit is ninety days. In Kansas six months may elapse before a claim for compensation for fatal injury is due and this period is one year in Oregon. In ten states[2] the limitations do not operate until six months have elapsed, and in California this is extended to one year for fatal cases.

In twenty states[3] the limitation period is fixed at one year, and in three states[4] two years may elapse between the occurrence of the accident and the filing of a claim.

The law in Oklahoma is a little different from those of other states in that it provides that claims for compensation may be filed at any time after the first seven days following the accident.

In cases of insanity or other disabilities of such character that the injured person is not competent or able to give notice of injury or claim, the laws in general provide that failure to give notice under such circumstances will not bar the consideration of the claim when it is filed. Also the commissions have been quite liberal in the matter of notice or claim, provided the employer has not been prejudiced by failure to give such notice. The law in Connecticut[5] states:

> "Any employee who has sustained an injury in the course of his employment shall forthwith notify his employer, or some person representing him, of such injury; and on his

[1]Alabama, Iowa, Kansas, Oregon.
[2]California, Illinois, Massachusetts, Michigan, Montana, Nebraska, New Hampshire, Texas, Vermont, West Virginia.
[3]Colorado, Connecticut, Delaware, Georgia, Idaho, Kentucky, Louisiana, Maine, Maryland, Minnesota, Nevada, New Jersey, New Mexico, New York, Pennsylvania, Rhode Island, South Dakota, Tennessee, Virginia, Washington.
[4]Indiana, Ohio, Wisconsin.
[5]Public Acts of 1921, Chap. 306, Sec. 5347.

TABLE 3: PROVISIONS IN WORKMEN'S COMPENSATION LAWS REGARDING NOTICE OF INJURY AND CLAIM

(National Industrial Conference Board)

State	Notice of Injury		Time limit for filing claim
	Time limits following accident	To whom given	
Alabama	5 days	employer	90 days
Arizona	2 weeks	employer or foreman	Embodied in notice of injury
California	30 days	employer	6 months for injury, 1 yr. for death
Colorado	2 days	employer	1 year
Connecticut	"Forthwith"	employer	1 year
Delaware	14 days, may be extended to 30 or 90 days in special cases	employer	1 year
Georgia	Immediately or as soon as practicable	employer	1 year
Idaho	Soon as practicable	employer	1 year
Illinois	Soon as practicable	employer	6 months
Inidana	Soon as practicable	employer or representative	2 years
Iowa	15 days	employer or representative	90 days
Kansas	10 days	employer	3 mo. for injury 6 mo. for death
Kentucky	Soon as possible	employer	1 year
Louisiana	6 months	employer	1 year
Maine	30 days	employer	1 year
Maryland	10 days injury 30 days after death	employer	1 year
Massachusetts	Soon as practicable	employer	6 months
Michigan	3 months	employer	6 months
Minnesota	14 days	not stated	1 year
Montana	60 days	employer or agent	6 months
Nebraska	Soon as practicable	employer	6 months
Nevada	"Forthwith"	employer	1 year
New Hampshire	Soon as practicable	employer	6 months
New Jersey	14 days	employer	1 year
New Mexico	2 weeks	employer	1 year
New York	30 days	employer and commission	1 year
North Dakota	60 days	compensation bureau	60 days
Ohio	1 week	commission	2 years
Oklahoma	30 days	employer and commission	Any time after first 7 days
Oregon	not stated	not stated	3 mo. for injury 1 year for death
Pennsylvania	14 days	employer	1 year
Rhode Island	30 days	employer	1 year
South Dakota	Soon as practicable	employer	1 year
Tennessee	Immediately or as soon as practicable	employer	1 year
Texas	30 days	employer	6 months
Utah	no provisions	employer or insurance carrier	
Vermont	Soon as practicable	employer	6 months
Virginia	Soon as practicable	employer	1 year
Washington	not stated	commission	1 year
West Virginia	not stated	not stated	6 months
Wisconsin	30 days	employer	2 years
Wyoming	no provisions	no provision	no provision

failure to give such notice, the commissioner may reduce the award of compensation proportionately to any prejudice which he shall find the employer has sustained by reason of such failure; but the burden of proof with respect to such prejudice shall rest upon the employer."

The abridged provisions for filing notice and claim are shown in Table 3.

IV

ACCIDENT PREVENTION AND SAFETY EDUCATION

In comparatively few of the states having compensation laws is provision made for carrying on accident prevention and safety education work in cooperation with compensation adjustment activities. In those states whose laws bear upon these questions, the provisions fall within four groups. In one group, consisting of five states,[1] the duty of providing safety appliances to meet the requirements of the factory and other state laws is placed upon employers. In three states[2] industrial commissions carry on active accident prevention and safety education work. In three other states[3] the law provides for the formation of a mutual insurance company among the employers of the state and gives the directors of such companies the power to formulate and adopt rules for insuring the health and safety of the workers and to grant the insurance inspectors free access to the premises during regular working hours. In another group of five states[4] those employers who are insured in the state fund are subject to regulation by inspectors operating under this fund, and as this fund is usually administered by the compensation commission of the state, the commission in this way has direct jurisdiction over the accident prevention and safety inspection work in that state. In the latter group of states the law makes no provision for supervision by the compensation commission of those industries not insured in the state fund.

The California law[5] confers rather broad powers upon the industrial accident commission of that state which

> "is vested with full power and jurisdiction over, and shall have such supervision of, every employment and place of employment in this state as may be necessary adequately to enforce and administer all laws and all lawful orders requiring such employment and place of employment to be safe, and requiring the protection of life and safety of every employee in such employment or place of employment."

This commission is empowered to prescribe safety devices, safeguards and other protective methods to increase the safety of

[1]California, Maryland, Montana, Nevada, West Virginia.
[2]California, Colorado, Montana.
[3]Kentucky, Texas, Vermont.
[4]Idaho, Ohio, New York, North Dakota, Pennsylvania.
[5]Laws of 1917, Chap. 586, Sec. 38.

employment and of the place of employment; to fix reasonable standards and enforce reasonable orders for the adoption, installation and use of such safety devices and to fix standards for the construction, repair and maintenance of places of employment to make them safe. The commission has further power and authority to establish and maintain museums of safety and hygiene for the exhibition of safety devices, safeguards and other means for the protection of life. It is also authorized to publish and distribute bulletins on any aspect of this subject and to give illustrated lectures to employers, employees and the general public as to the cause and prevention of industrial accidents, occupational disease and related subjects.

The law of Colorado[1] provides that the commission or its agents may have access to any place of employment

> "for the purpose of collecting facts and statistics, examining the provisions made for the health, protection and safety of the employees, and bringing to the attention of every employer any rule, order, or requirement of the commission, or any law or any failure on the part of any employer to comply therewith."

The Montana law[2] confers similar powers to those given to the California commission, with the exception that no provision is made for museums of safety and lectures on accident prevention. The right of access by the commission's agents to any place of employment at least once a year for purposes of inspection is also granted in this law.

Employers under the Maryland law[3] are required to install safeguards or other methods of protection required by the commission and if an employee is injured because of the absence of such safeguards the employer is liable to a fine of from $50 to $500 to be paid into the state accident fund.

The law in Nevada[4] is similar, except that violation of any statute or ordinance or any departmental regulations under any statute, whereby a workman is injured, carries with it a penalty of from $300 to $2,000.

In West Virginia[5] the law provides that the compensation commissioner may approve rules which after approval must be adopted by the employers who must also keep the rules posted

[1]Acts of 1919, Chap. 210, Sec. 34.
[2]Laws of 1915, Chap. 96, Sec. 5 (d).
[3]Laws of 1920, Chap. 456, Sec. 54.
[4]Statutes of 1919, Chap. 176, Sec. 39.
[5]Acts of 1919, Chap. 9, Sec. 28.

conspicuously in and about the works. The Oregon law[1] provides that the commission shall investigate all cases where they have reason to believe that employers have failed to install or maintain any safety appliances, device or safeguard required by statute, and that all cases of failure to comply with such regulations shall be reported to the prosecuting attorney of the district in which the violation occurred.

While the law of New Jersey contains no provision bearing upon this question, the commissioner of labor in that state has developed a museum of safety located in Jersey City which aims to show the best safety practices in the installation and operation of many hazardous processes. In addition to matters relating to safety, this museum contains an exhibit of various types of lighting. It is operated in connection with the state rehabilitation work, which is also under the administrative guidance of the labor commissioner.

The laws of some of the states provide penalties for not conforming to the legal provisions and regulations, such penalty usually consisting of an increased amount of compensation to the employee whose injury is caused by the non-compliance. In Wisconsin and Utah the employer is penalized 15%, in California and Washington 50% of the premium for which he is liable, and in Nevada from $300 to $2,000. Likewise when the employee disregards safety rules or removes guards from hazardous machines he is fined 15% of his compensation in Utah and Wisconsin, 25% in Nevada, 10% in Washington and 50% in California.

[1]Laws of 1921, Chap. 311, Sec. 6630.

V

WAIVERS

The enactment of workmen's compensation laws in the various states took away from the employer the three cardinal defenses against liability previously in force: negligence of the worker, negligence of fellow worker and risks inherent in the occupation. It left with the employer the defenses of willful negligence and the results of intoxication on the part of the employee. In all but four states[1] the enactment of these laws also took away from the employer the right to demand a signed release from his workers, particularly defective workers, of all claims for damages for injuries which they might receive in the course of their employment.

In Connecticut the employee may sign a waiver, but such waiver is not binding unless and until it has been approved by a compensation commissioner. The same provision holds true under the Illinois law, but its use is more restricted than it is in Connecticut. In Kansas and Ohio only blind workers are permitted to sign waivers for injuries; and in these states the waivers apply only to injuries which may occur as a direct result of blindness, and do not cover all injuries.

In the states which permit the signing of waivers, compensation may be claimed under the law for injuries not attributable to the particular defect described in the waiver. Only such accidents as result directly from the defect enumerated in the waiver are exempted from the provisions of the compensation act.

[1]Connecticut, Illinois, Kansas, Ohio.

VI

WAITING PERIOD

With the exception of Oregon, all the states having compensation laws require that a certain period must elapse between the occurrence of the injury and the beginning of compensation payments. In the early history of these laws, this period was more extended than at the present time. Two states have reduced the waiting period to three days; in twenty-four states this period is one week; in seven states the period is ten days; and in eight states two weeks must elapse between the occurrence of the injury and the beginning of compensation.

These periods are eliminated, however, in many of the states if the disability extends beyond a certain time, usually from three to six or seven weeks, and compensation is paid from the date of injury. Table 4 gives these provisions in detail:

TABLE 4: WAITING PERIOD REQUIRED IN WORKMEN'S COMPENSATION LAWS, BY STATES[a]

(National Industrial Conference Board)

None	Three days	One week	Ten days	Two weeks
Oregon	Maryland Utah	California Connecticut (4) Georgia Idaho (7) Illinois (4) Indiana Kansas Kentucky Louisiana (6) Maine Michigan (6) Minnesota (4) Nebraska (6) Nevada (2) North Dakota (1) Ohio Oklahoma (3) Rhode Island (4) Texas Vermont Washington [b] West Virginia Wisconsin (4) Wyoming (3)	Colorado Massachusetts New Jersey New Mexico Pennsylvania South Dakota (6) Virginia (6)	Alabama (4) Arizona (2) Delaware (4) Iowa Montana (6) New Hampshire New York (7) Tennessee (6)

[a] Figures in parenthesis represent the number of weeks of disability which must elapse before compensation can be paid for the waiting period. Where no figures are given the waiting period is not compensated.

[b] 30 days, as specified in the Washington law.

VII

PERSONNEL OF MEDICAL DEPARTMENTS

This investigation has shown that fifteen states[1] have a physician attached to the industrial board or commission in the capacity of medical director or medical advisor. In addition, practically all the industrial boards and commissions have the right to appoint a properly qualified physician to make an examination of the claimant and report his findings directly to the board. These are known as examining or impartial physicians. The fee allowed by law for making such examinations is usually set at $5 and traveling expenses.

In general, the duties of the medical advisors are to make examinations of claimants in disputed cases, to pass on medical bills submitted for services, and to advise the board members on any questions coming before them involving a medical problem. With the exception of Washington, where a physician is a member and chairman of the Medical Aid Board, none of the medical directors or advisors has administrative power. They can only express an opinion and make recommendations, final determinations being left to the board members.

In four states[2] it is reported that the medical director has one or more assistants associated with him, whose duties and functions are similar to his own. In addition, Oregon and Washington have technicians, physio-therapeutists and X-ray operators attached to their respective medical departments. In Oregon, the rehabilitation work of the state is carried on under supervision of the State Industrial Accident Commission.

In New Jersey the physicians attached to the rehabilitation clinic act in the capacity of medical advisors to the Bureau of Workmen's Compensation. The local offices of both bureaus are in the same building so that a physician is always available. In this state the compensation and rehabilitation activities are under the jurisdiction of the Department of Labor, which arrangement eliminates the need for a special medical department in the Bureau of Workmen's Compensation.

[1]California, Illinois, Iowa, Kentucky, Maryland, Massachusetts, Nevada, New York, North Dakota, Ohio, Oklahoma, Oregon, Virginia, Washington, West Virginia.
[2]California, Illinois, New York, Oregon.

In Pennsylvania the Bureau of Workmen's Compensation and the Bureau of Rehabilitation are parts of the Department of Labor and Industry. In many of the other states the rehabilitation work is carried on under the Department of Education and in cooperation with the Federal Government under the Vocational Rehabilitation Act.

In eight of the states[1] the medical director is rendering service on a part time basis, while the same official in Illinois, Nevada, New York and Washington is reported as being on a full time basis. In Kentucky it is reported that the medical director is on a fee basis, being paid only for the service which he renders to the Workmen's Compensation Board.

In Massachusetts, in addition to the medical advisor, there is an advisory commission of seven physicians, two of whom are designated by the Massachusetts Medical Society, two by the Massachusetts Homeopathic Medical Society and three selected from the profession in the state at large. The duties of this committee are to advise the members of the board and its medical advisor on problems which arise in connection with the administration of the law in that state.

In Pennsylvania, in addition to the examining or impartial physicians that may be called upon by the Workmen's Compen-

TABLE 5: MEDICAL DEPARTMENTS, WORKMEN'S COMPENSATION BOARDS

(National Industrial Conference Board)

State	Title	Compensation
California	Medical Director	$3,600[a]
Illinois	Chief Medical Director	[b]
Iowa	Medical Advisor	1,200[a]
Kentucky	Medical Director	[c]
Maryland	Chief Medical Examiner	2,000[a]
Massachusetts	Medical Advisor	4,500
Nevada	Chief Medical Advisor	2,400[a]
New York	Chief Medical Director	6,000
North Dakota	State Medical Examiner	1,500
Ohio	Chief Medical Examiner	3,500[d]
Oklahoma	President of Board	1,200[a]
Oregon	Chief Medical Advisor	3,000[a]
Virginia	Medical Examiner	1,800[a]
Washington	Chief Medical Advisor	9,000
West Virginia	Chief Medical Examiner	2,520

[a]Part time service only.
[b]$10,000 appropriated for medical work.
[c]Fee basis of payment.
[d]Information taken from U. S. Bureau of Labor Statistics. *Monthly Labor Review.* July, 1922, p. 219.

[1]California, Iowa, Maryland, Massachusetts, Oklahoma, Oregon, Virginia, West Virginia.

sation Board to examine cases, provision is made for the appointment of three physicians on a full time basis at salaries not exceeding $3,000 per year each, whose duty it is to attend hearings before referees or the board, make examinations and give testimony as to the condition of the claimant in the case.

Table 5 gives the essential information regarding the personnel of the medical departments of the various industrial boards and commissions having such departments.

VIII

MEDICAL FEES

The question of medical fees in compensation cases is one that, next to free choice of physician, probably has caused more controversy and opposition from the medical profession than any other provision in these laws. Thirteen[1] of the states have adopted official fee schedules to guide them in the payment of bills for medical service. In ten states[2] the fees that physicians may charge for compensation work are subject to the approval of the commission. Five other states[3] provide that fees be "fixed" or regulated by the board. In nine states[4] disputes as to medical fees, particularly as to their reasonableness, may be referred to the boards for settlement. In New York and Utah medical fees are not a valid claim unless first approved by the board and commission.

Many of the laws mentioning medical fees state that such fees shall be just and reasonable, and that they shall be no higher than fees charged for treatment of similar cases of like social standing, not coming under the compensation law. The following provision appears in whole or in substance in the laws of fourteen states:[5]

> "The pecuniary liability of the employer for the medical, surgical or hospital service herein required shall be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living."

The law in Louisiana provides that[6] "fees of physicians under this act shall be reasonable and measured according to the workman's station and shall be approved by the court." The Tennessee law reads[7] that fees for medical service must be "limited to such charges as prevail for similar treatment in the community where the injured employee resides."

[1]California, Colorado, Idaho, Maryland, Nebraska, Nevada, North Dakota, Ohio, Oregon, South Dakota, Utah, Washington, West Virginia.
[2]Connecticut, Iowa, Indiana, Georgia, Michigan, Nebraska, South Dakota, Louisiana, Vermont, Virginia.
[3]Illinois, Kentucky, Maryland, Oklahoma, Texas.
[4]Alabama, California, Delaware, Maine, Massachusetts, Minnesota, Rhode Island, Tennessee, Wisconsin.
[5]Alabama, Connecticut, Georgia, Idaho, Indiana, Kentucky, Maryland, Minnesota, New York, Nevada, Oklahoma, Texas, Vermont, Virginia.
[6]Acts of 1914, Chap. 20, Sec. 22–1.
[7]Acts of 1919, Chap. 123, Sec. 25.

In addition to the provisions mentioned in the two preceding paragraphs the Texas law[1] requires the Industrial Accident Board to "consider the increased security of payment afforded by this Act." This increased security of payment is one of the determining factors in the formation of fee schedules, as the physician takes no risks of non-payment of fees as he does in private practice.

Because the statutes are explicit in regulation of medical fees, contested court cases are very few. The general practice is that the commissions may review any fee charged on the ground that it is excessive and reduce it to a reasonable basis. However, in New York the Supreme Court held[2] that the supervision of fees under the Workmen's Compensation Act applied only to medical attendance by a physician of the workman's selection so as to guard against the employer being held liable for unreasonable charges. When the physician is of employer's selection it is presumed that the latter is capable of making a satisfactory agreement as to medical expense with his own physician. The same rule is laid down by the Supreme Court of Indiana,[3] which held that the fees of physicians are subject to the approval of the Industrial Board only where the services are rendered in case of emergency or because of employer's failure to furnish a physician, or when the injured is justified in procuring the services of a physician other than the one furnished by the employer. When the physician's services are rendered under a contract with the employer, the fees therefor are not subject to the approval of the board.

An example of fee supervision is afforded by a case before the Illinois Industrial Commission[4] in which a bill of $166 was reduced to $96. The reason for this action was that all bills for medical and hospital services

> "should be based on reasonable and customary rates, and the fact that bills are to be paid by the employer should not act as an incentive for physicians to make unreasonable charges. This board will scrutinize with the same degree of care all medical bills in connection with compensation claims under this act, the same as any and all other fees and charges thereunder."

A physician's bill was similarly reduced in Massachusetts[5]

[1]Acts of 1917, Chap. 129, Sec. 7b.
[2]*Feldstein* v. *Buick Motor Co.* 187 N. Y. Supp. 417.
[3]*National Car Coupler Co.* v. *Sullivan.* 126 N. E. 494.
[4]*Nowitz* v. *Cohn.* Illinois. Industrial Board. Bulletin No. 1, p. 90.
[5]*In re Simonski.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 4, p. 273.

from $100 to $50 for a hernia operation, on the ground that the latter amount was considered the reasonable fee in cases of industrial accidents. Also in the Rhode Island Superior Court[1] a physician's claim was reduced from $189 to $125, it being held that $5 a visit was an excessive charge for visits to an injured employee, and that fees should be those which a person in moderate circumstances could pay and would ordinarily be charged.

Where a physician's bill was in dispute, the Wisconsin commission[2] awarded the full amount, finding the charges reasonable, "considering the nature of the injury, the skill required in the operation and the results obtained."

Although issues resting on contract between hospital and employer and his insurer have no place in proceedings under the Nebraska law, in a case[3] where there was no contract and the employee was placed in a public ward of a city hospital and treated by a member of the hospital staff, it was ruled that the charge should be based upon the patient's standard of living and determined as if the treatment were to be paid for by himself. A similar case was passed upon by the Connecticut compensation commissioner, 3rd District.[4] Here when it was learned that the injured was a "compensation case" he was transferred from the public ward to a "compensation" ward, but as a person of his standard of living would have ordinarily been placed in a public ward the employer was not required to pay for the additional cost of the more expensive accommodations given by the hospital. Another feature of this case was the charge by the hospital physician of $93 for professional services. As the employer acquiesced in the treatment by the hospital, which involved treatment by the physician only as a representative of the hospital, a charge for such professional services was disallowed by the commissioner.

Under the Pennsylvania law state hospitals are required to give free medical service to miners. Where a miner was injured in the course of his employment and was sent to a state hospital with the permission and approval of his employer, the employer claimed the hospital attention to the miner should

[1] *McCabe* v. *Gesualledo and Jordan*. Weekly Underwriter. Vol. 98, No. 21, May 25, 1918, p. 725.

[2] *Myren* v. *Lange Canning Co.* Wisconsin. Industrial Commission. 7th Annual Report, p. 25.

[3] *Hull* v. *U. S. Fidelity & Guaranty Co.* 166 N. W. 628.

[4] *Schillinger* v. *Yale Brewing Co.* Connecticut. Compensation Decisions. Vol. 3, p. 181.

be free. The case was brought before the Court of Common Pleas, which held[1] that the employer was liable for reasonable charges because it was the duty of the employer to furnish medical treatment and because the law did not exempt employers from paying for medical service.

In a similar Pennsylvania case[2] the employer was obliged to pay the hospital for supplies and service rendered to an injured employee, but the claim of the chief surgeon of the hospital for professional services was denied by the board, which said:

> "Physicians and surgeons attached to a hospital staff seek out these places for experience and prestige. They render no separate bills to ward patients to whom they minister in their professional capacity and they can gain no right in a compensation case to depart from the ordinary and usual rule or custom of the hospital unless they can show in each particular case a contract of hiring. It is only by contract that an employer can become obligated to pay for such services under such circumstances."

A contrary ruling as to the fee of the physician on a state hospital staff was made by the Maine Industrial Accident Commission.[3] After two unsuccessful attempts by local physicians to reduce a fracture of the arm the injured employee was sent to the Eastern Maine General Hospital at Bangor where the fracture was reduced by a member of the hospital staff. The employer contended that because the surgeon who performed the operation was a member of the hospital staff his services should either be free or considerably reduced. To this the commission could not agree, but held that:

> "Nothing contemplated in the act requires any member of the staff of any hospital, public or private, to give his services to any injured employee, or that the hospital shall make any sacrifice therefor.
>
> "If the services are rendered an injured employee at a hospital by regular members of the hospital staff both the hospital and the physician or surgeon rendering services are entitled to reasonable compensation for all services rendered.
>
> "Injured employees entitled to compensation under the terms of the Maine Workman's Compensation Act are in no sense to be considered as objects of charity or of State aid. They are entitled by the terms of the Act to be furnished all necessary medicine, hospital and surgical treatment, according to the degree of the injury, at the expense of the employer or the Insurance Carrier and at the expense of no other person or institution in this State, and injured em-

[1] *State Hospital* v. *Lehigh Valley Coal Co.* 1 Mackey 80.
[2] *Yost* v. *Coxe Traveling Grate Co.* Pennsylvania. Department of Labor and Industry. *Monthly Bulletin*, Vol. 1, No. 2, p. 24.
[3] *McClure* v. *American Woolen Co.* September 22, 1920 (MS.).

ployees are as much entitled to receive compensation for such care as they are to receive compensation for loss of time."

Official Fee Schedules

In certain of the states having compensation laws, fee schedules covering the medical services rendered to injured workers have been promulgated by the industrial boards. These schedules in many cases have been drafted following conferences with the state medical societies and aim to allow a fee in keeping with those charged for the care and treatment of other persons of the same standard of living in the same community.

The medical director of the California Industrial Accident Commission reports[1] that the schedule in use in that state has been adopted by the California State Medical Society for guidance in charges for compensation work. "The use of the schedule has developed a fee for office service which, continuing an hour, would amount to $6.25. This figure is the true basis for office work."

In thirteen states[2] official schedules have been adopted for the determination of medical fees. The items covered by these schedules vary to a considerable extent; some states have very complete schedules to cover many conditions, while other states list only the more important injuries met with in compensation work. Fees allowed for those conditions common to all or a majority of the states having official schedules are noted in Table 6.

In all states having official fee schedules, the difficulties of an inelastic schedule of fixed amounts is appreciated. But, on the other hand, it is realized that such schedules, to be of value, must be definite in their statements. In California the commission says:[3]

> "the schedule here presented is designed for use in connection with medical services rendered an individual with an average earning capacity of $1,250.00 per annum. To this class belongs the average individual which the Workmen's Compensation Insurance and Safety Act is intended to cure and relieve."

The official schedules in the other twelve states having fee schedules do not mention economic limits to which the schedules apply, but the laws provide that medical fees shall be in keeping

[1]Letter, April 17, 1922.

[2]California, Colorado, Idaho, Maryland, Nebraska, Nevada, North Dakota, Ohio, Oregon, South Dakota, Utah, Washington, West Virginia.

[3]California Industrial Accident Commission. Fee Schedule for Physicians and Surgeons, Note D.

with charges for such services rendered to persons of like social standing.

Six of these official fee schedules[1] are declared to be for maximum fees, while three[2] are given as minimum fees. No reference is made in four states[3] as to whether the schedule is a maximum or minimum one. In Nebraska the "schedule contemplates that the members of the profession shall receive fair and just remuneration in return for the very best service they are capable of rendering."

Fee schedules of nine states[4] contain the provision that daily dressings are included in the fees allowed unless an excessive amount of dressing material is used, in which case it can be charged for at cost. In the other four states[5] no mention is made of the inclusion of the cost of daily dressing.

The schedules of seven states[6] include payment for subsequent visits in the amount allowed for treatment, while the schedule in one state, Nevada, specifically says that "ordinary first dressings are included, but not subsequent visits." The schedules of the remaining four states[7] make no mention of this matter.

Schedules in four states[8] stipulate that a proportionate part of the prescribed fee will be paid in cases which terminate fatally within seven days. The Ohio schedule limits the time of fatal termination to a few hours.

In six of the states[9] separate bills must be filed by those furnishing services in the case, such as assistants, nurses, anæsthetists, etc.

Three states[10] require that copies of all prescriptions written must be attached to the physician's bill when presented.

The fee schedules in five states[11] provide for the services of a special nurse in cases of severe injury. Such nursing service is for three days only, unless ordered continued by the commissions in North Dakota, Oregon and Washington. In Utah the period is for seven days, while the Ohio schedule says when "the services are necessary and ordered by the attending physician."

[1]Colorado, North Dakota, Oregon, Utah, Washington, West Virginia.
[2]California, Nevada, Ohio.
[3]Idaho, Maryland, Nebraska, South Dakota.
[4]Colorado, Maryland, Nebraska, Nevada, North Dakota, Ohio, Oregon, Utah, Washington.
[5]California, Idaho, South Dakota, West Virginia.
[6]Colorado, Idaho, Nebraska, North Dakota, Ohio, Oregon, Washington.
[7]Maryland, South Dakota, Utah, West Virginia.
[8]North Dakota, Oregon, Utah, Washington.
[9]North Dakota, Ohio, Oregon, Utah, Washington, West Virginia.
[10]North Dakota, Oregon, Washington.
[11]North Dakota, Ohio, Oregon, Utah, Washington.

TABLE 6: OFFICIAL MEDICAL FEE SCHEDULES ADOPTED BY WORKMEN'S COMPENSATION BOARDS*

(National Industrial Conference Board)

Disability	California	Colorado	Idaho	Maryland	Nebraska	Nevada	North Dakota	Ohio	Oregon	South Dakota	Utah	Washington	West Virginia
GENERAL ITEMS													
First visit	$2.50	$3.00	$5.00	....	$3.00	$3.00	$3.00	$3.00	$3.00	....	$5.00	$3.00	$3.00
Subsequent visits—home	....	2.00	2.50	....	....	2.50	2.50	3.00	2.50	$3.00	3.00	2.50	2.50
Subsequent visits—hospital	....	1.50	1.50	....	....	2.50	1.50	2.00	1.50	2.00	....	2.00	2.00
Subsequent visits—office	....	1.50	2.00	....	1.50	2.00	1.50	1.50	1.50	2.00	....	2.00	2.00
Mileage—day	.75	.60	.75	$0.50	1.00	1.00	.75	....	.75	1.00	1.00	.75	....
Mileage—night	1.00	....	1.00	....	....	1.50	1.00	....	1.00	1.50	....	....	....
Assistant, major operation	12.50	10.00	10.00	10.00	10.00	15.00	10.00	10.00	10.00	25.00	25.00	10.00	10.00
Assistant, minor operation	6.00	5.00	5.00	2.00–5.00	5.00	10.00	5.00	5.00	5.00	10.00	15.00	5.00	5.00
Anæsthetist, major operation	10.00	5.00	10.00	5.00	10.00	10.00	10.00	10.00	10.00	10.00	....	10.00	10.00
Anæsthetist, minor operation	5.00	....	5.00	....	5.00	5.00	5.00	5.00	5.00	5.00	....	5.00	5.00
Trained nurse, per day	....	....	....	....	....	6.00	5.00	....	5.00	....	....	5.00	....
Hospital, ward charge per week	....	15.75	....	....	....	24.50	....	....	....	....	....	18.00	....
Hospital, private room, charge per week	....	....	....	....	....	....	....	....	....	....	....	25.00	....
Physical examination	....	....	....	5.00	....	....	....	....	....	....	5.00	5.00	....
Herniotomy—single	40.00	50.00	....	55.00	75.00	75.00	75.00	75.00	75.00	100.00	100.00	75.00	50.00
Herniotomy—double	....	....	75.00	....	....	....	110.00	100.00	110.00	....	....	110.00	....
Laparotomy	....	....	100.00	50.00	....	....	125.00	100.00	125.00	....	200.00	....	75.00
Laminectomy	100.00	....	....	50.00	150.00	100.00	100.00	....	100.00	....	150.00	100.00	....
Decompression	60.00	....	100.00	50.00	100.00	75.00	100.00	....	100.00	100.00	150.00	100.00	100.00
Paracentesis	10.00–25.00	....	....	10.00	....	20.00	....	....	....	....	25.00	15.00	....
DISLOCATIONS													
Mandible	Fees according to magnitude and time consumed.	....	10.00	5.00	10.00	....	10.00	10.00	10.00	25.00	25.00	10.00	....
Clavicle		....	....	12.00	....	....	....	....	....	....	....	25.00	....
Shoulder		....	25.00	25.00	20.00	....	25.00	35.00	25.00	40.00	25.00	25.00	25.00
Elbow		....	25.00	10.00	25.00	....	25.00	50.00	25.00	40.00	25.00	25.00	25.00
Wrist		....	15.00	7.00	15.00	....	15.00	....	15.00	40.00	25.00	15.00	15.00
Finger		....	5.00	3.50	5.00	....	5.00	10.00	5.00	10.00	10.00	5.00	5.00
Hip		....	45.00	25.00	45.00	20.00	45.00	50.00	45.00	75.00	100.00	45.00	45.00
Knee		....	25.00	15.00	25.00	....	25.00	50.00	25.00	40.00	100.00	25.00	25.00
Patella		....	....	7.00	5.00	....	....	....	....	....	....	....	....
Ankle		....	25.00	15.00	20.00	....	25.00	25.00	25.00	40.00	25.00	25.00	25.00
Toe		....	5.00	3.50	5.00	....	5.00	5.00	5.00	10.00	10.00	5.00	5.00
FRACTURES													
Nose	12.50	....	10.00	7.00	10.00	15.00	10.00	10.00	10.00	....	25.00	10.00	10.00
Mandible	20.00	....	25.00	25.00	50.00	25.00	25.00	40.00	25.00	75.00	50.00	25.00	20.00

*The states listed are the only ones having an official fee schedule

Clavicle	$20.00	$25.00	$35.00	$10.00	$25.00	$30.00	$35.00	$50.00	$35.00	$30.00	$25.00	$45.00	$30.00
Scapula	20.00	....	40.00	15.00	30.00	25.00	40.00	40.00	40.00	40.00	25.00	35.00	25.00
Ribs	6.00	10.00	10.00	10.00	15.00	10.00	10.00	10.00	10.00	20.00	25.00	10.00	10.00
Humerus	40.00	50.00	50.00	40.00	50.00	50.00	50.00	75.00	50.00	50.00	50.00	75.00	45.00
Ulna	12.50	35.00	35.00	15.00	35.00	25.00	35.00	50.00	35.00	25.00	25.00	35.00	30.00
Radius	12.50	35.00	35.00	15.00	35.00	25.00	35.00	50.00	35.00	25.00	25.00	35.00	30.00
Colles	30.00	....	35.00	20.00	35.00	35.00	35.00	....	35.00	....	50.00	40.00	....
Hand	7.50	15.00	15.00	5.00	15.00	15.00	15.00–35.00	15.00	15.00–35.00	15.00	25.00	20.00	10.00–20.00
Fingers	5.00	15.00	15.00	5.00	10.00	....	15.00	15.00	15.00	10.00	....	20.00	10.00
Pelvis	25.00	....	75.00	....	100.00	35.00	70.00	....	70.00	100.00	100.00	70.00	55.00
Femur	40.00	70.00	100.00	50.00	100.00	75.00	100.00	100.00	100.00	125.00	100.00	100.00	75.00
Patella	20.00	25.00	50.00	30.00	25.00–50.00	25.00	50.00	50.00–100.00	50.00	75.00	100.00	25.00	50.00
Tibia	12.50	50.00	50.00	20.00	50.00	40.00	50.00	50.00	50.00	50.00	50.00	40.00	40.00
Fibula	12.50	20.00	25.00	20.00	35.00	25.00	25.00	25.00	25.00	50.00	50.00	25.00	25.00
Potts	30.00	....	75.00	25.00	65.00	50.00	70.00	75.00	70.00	....	50.00	75.00	....
Foot	7.50	20.00	35.00	5.00	25.00	15.00	20.00–35.00	15.00	20.00–35.00	15.00	25.00	20.00–35.00	20.00–35.00
Toe	5.00	10.00	15.00	5.00	10.00	....	10.00	15.00	10.00	10.00	....	15.00	10.00
Compound	[c]	[c]	[c]	[a]	[a]	....	[b]	[c]	[b]	[c]	[b]	[a]	....
EYE													
Enucleation	40.00	50.00	75.00	50.00	100.00	75.00	50.00	50.00	50.00	50.00	75.00	50.00	50.00
Iridectomy	....	....	25.00	....	75.00	....	75.00	50.00	75.00	....	100.00	50.00	....
Use of giant magnet	....	....	....	....	75.00	....	75.00	15.00	75.00	....	....	....	....
Foreign body embedded in cornea	5.00	....	5.00	....	2.00	10.00	5.00	3.00	5.00	....	3.00	3.00	....
X-RAY													
Head	10.00	....	10.00	5.00	10.00	6.00	10.00	10.00	10.00	15.00	....	10.00	15.00
Chest	10.00	....	10.00	5.00	10.00	....	10.00	10.00	10.00	15.00	....	7.50	15.00
Pelvis	10.00	....	10.00	5.00	10.00	....	7.50	10.00	7.50	15.00	....	10.00	10.00
Extremity	5.00	....	5.00	5.00	7.50	2.50	5.00	10.00	5.00	8.00–10.00	....	5.00	7.50
AMPUTATIONS													
Shoulder	50.00	70.00	100.00	50.00	100.00	75.00	100.00	75.00	100.00	100.00	100.00	75.00	60.00
Arm	30.00	50.00	50.00	30.00	75.00	45.00	50.00	75.00	50.00	75.00	75.00	50.00	....
Forearm	30.00	50.00	50.00	30.00	75.00	45.00	50.00	75.00	50.00	75.00	75.00	50.00	45.00
Hand	30.00	50.00	50.00	30.00	75.00	45.00	50.00	75.00	50.00	50.00	75.00	50.00	45.00
Finger	7.50	20.00	25.00	10.00	10.00	15.00	25.00	25.00	25.00	15.00	25.00	20.00	10.00
Hip	100.00	100.00	150.00	75.00	125.00	100.00	150.00	150.00	150.00	125.00	150.00	125.00	80.00
Thigh	75.00	65.00	75.00	50.00	100.00	75.00	65.00	125.00	65.00	100.00	125.00	70.00	60.00
Leg	30.00	65.00	65.00	45.00	75.00	50.00	65.00	....	65.00	75.00	75.00	60.00	45.00
Ankle	30.00	65.00	65.00	30.00	75.00	50.00	65.00	75.00	65.00	....	75.00	60.00	45.00
Foot	30.00	65.00	65.00	40.00	75.00	50.00	65.00	75.00	65.00	75.00	75.00	60.00	45.00
Toe	7.50	20.00	25.00	10.00	10.00	15.00	25.00	25.00	25.00	15.00	25.00	20.00	10.00

[a]Add 25% to schedule. [b]Add 30% to schedule. [c]Add 50% to schedule.

Likewise, according to the schedule in four states,[1] private hospital rooms will be provided when indicated. In Utah such provision is for seven days and in Washington for three days only, unless extended by the commission. The schedules of Colorado and Nevada make no stipulations as to time.

The schedules of three states[2] contain provisions for dental treatment. Those of Ohio and Washington itemize the fee permitted for different forms of dental treatment. The Utah schedule provides that needed dental work must be agreed upon by the injured worker and the employer or his insurance carrier before the work is done. In case the interested parties cannot agree the Industrial Commission will decide the matter. The law in Colorado[3] provides that in case of injury to the teeth the employee is entitled to restorative and reconstructive work to the value of $100.

In six states[4] provision is made for an additional fee, at the discretion of the commission, for the treatment of unoperated complicated fractures in which union has not taken place within ninety days.

All states having official fee schedules make provision for X-ray work. California requires an X-ray picture in all cases of bone injury. Utah and Washington specify that X-ray pictures shall be taken of all fractures or other injuries of an indefinite character. The other states do not indicate what type of injury shall be X-rayed. Four states[5] specify that two exposures shall be taken when required. The Washington schedule calls for two exposures in many of the injuries listed, but not in all. The West Virginia schedule states that bills for X-ray work must be accompanied by a print of the injury.

Unofficial Fee Schedules

Following the analysis of official fee schedules which have been adopted by various compensation boards, information was obtained from ten other states[6] as to the amount charged for the treatment of injuries to industrial workers coming under the workmen's compensation laws of these states. This information appears in Table 7. It should be understood that while

[1]Colorado, Nevada, Utah, Washington.
[2]Ohio, Utah, Washington.
[3]Acts of 1915, Chap. 180, Sec. 74.
[4]Idaho, North Dakota, Ohio, Oregon, Utah, Washington.
[5]Idaho, Nebraska, North Dakota, Oregon.
[6]Arizona, Delaware, Illinois, Kentucky, Michigan, Montana, Oklahoma, Texas, Vermont, Virginia.

in some cases these figures were obtained from representatives of the state medical associations and in others from the schedule of fees adopted by such associations, in other cases they represent the fee schedules of a single county or city in the state and are not indicative of the practice in the state as a whole. In some of these states an elastic fee schedule was submitted, in which case the minimum figures have been quoted. In other cases the figures given for operative injuries apply only to the operating fee, subsequent visits being charged as an additional expense against the injury.

It is felt that while these schedules have a limited application, they are useful for purposes of comparison with the official fee schedules.

TABLE 7: UNOFFICIAL MEDICAL FEE SCHEDULES

(National Industrial Conference Board)

Disability	Arizona	Delaware	Illinois	Kentucky	Michigan	Montana	Oklahoma	Texas	Vermont	Virginia
GENERAL ITEMS										
First visit	$2.50	$3.00	$3.00	$3.00	$5.00[a]	$2.00	....	$3.00	$2.00	$2.00
Subsequent visits: home	2.50	2.00	3.00	2.00	3.00	3 00	$2.00	....	2.00	2.00
Subsequent visits: hospital	2.00	2.00	3.00	2.00	3.00	5.00	2.00	....	....	2.00
Subsequent visits: office	1.50	1.00–3.00	2.00	1.00	2.00	2.00	1.00	2.00	1.00	2.00
Mileage: day	.75–1.00	....	1.00	.50	1.00	1.00	1.00	1.00	....	....
Mileage: night	.75–1.00	....	2.00	1.00	1.50	2.00	1.00–1.50	2.00	....	....
Assistant major operation	15.00	10.00	50.00	10.00	25.00	10.00	10.00	....	....	10.00
Assistant minor operation	10.00	5.00	10.00	5.00	10.00	....	5.00	....	....	5.00
Anæsthetist major operation	10.00	10.00	15.00	10.00	15.00	10.00	10.00	5.00	....	10.00
Anæsthetist minor operation	10.00	5.00	10.00	5.00	10.00	....	5.00	....	....	5.00
Physical examinations	3.00	....	5.00	3.00–5.00	5.00	....	5.00-10.00	5.00	....	10.00
Herniotomy: single	75.00	50.00–100.00	150.00	50.00	75.00	100.00	50.00	150.00	....	100.00
Herniotomy: double	150.00	75.00–100.00	200.00	75.00	100.00	....	100.00	....	....	150.00
Laparotomy	75.00	50.00–100.00	150.00	50.00	150.00	100.00	100.00	250.00	....	150.00
Laminectomy	....	100.00	200.00	50.00–75.00	250.00	....	250.00	....	....	200.00
Decompression	30.00–75.00	100.00	200.00	50.00	250.00	100.00	75.00	.....	....	150.00
Paracentesis	15.00–30.00	10.00	10.00	15.00	50.00	....	10.00	50.00	....	20.00
DISLOCATIONS										
Mandible	10.00–15.00	15.00	25.00	5.00	25.00	10.00	25.00	....		10.00
Clavicle	10.00–15.00	25.00	25.00	....	75.00	....	25.00	....		15.00
Shoulder	15.00	35.00	25.00	15.00	25.00	25.00	25.00	100.00		50.00
Elbow	15.00	35.00	25.00	10.00	50.00	25.00	10.00	100.00		25.00
Wrist	10.00	15.00	25.00	10.00	50.00	10.00	10.00	....		25.00
Finger	5.00-10.00	5.00	10.00	3.50	10.00	5.00	5.00	25.00		10.00
Hip	20.00	45.00	100.00	25.00	75.00	25.00	25.00	100.00		75.00
Knee	15.00	25.00	75.00	20.00	75.00	50.00	25.00	100.00		75.00
Patella	10.00–15.00	25.00	50.00	10.00	50.00	....	25.00	....		25.00
Ankle	10.00-15.00	25.00	25.00	20.00	50.00	25.00	10.00	....		25.00
Toe	5.00-10.00	5.00	10.00	5.00	10.00	5.00	5.00	25.00		10.00
FRACTURES										
Nasal	5.00-20.00	....	25.00	10.00	75.00	10.00	10.00	....		10.00
Mandible	25.00	....	50.00	10.00	150.00	25.00	25.00	50.00		25.00
Clavicle	20.00	35.00	35.00	15.00	75.00	25.00	25.00	50.00		20.00
Scapula	20.00	40.00	35.00	20.00	100.00	25.00	25.00	....		20.00
Ribs	10.00	10.00	10.00	10.00	50.00	....	10.00	25.00		15.00

Ordinary dislocations $5.00 to $50.00.

[a] With dressing.

Humerus	$35.00	$75.00	$35.00	$20.00–25.00	$100.00	$50.00	$50.00	$50.00	Uncomplicated reductions, $10.00 to $50.00. Operative reductions, $50.00 and up.	$25.00
Ulna	25.00	35.00	25.00	15.00	50.00	50.00	25.00	50.00		25.00
Radius	25.00	35.00	25.00	15.00	50.00	50.00	25.00	50.00		25.00
Colles	15.00–25.00	....	25.00	20.00	75.00	....	25.00	....		25.00
Hand	20.00	....	10.00	5.00	25.00	10.00	10.00	....		15.00
Fingers	5.00–10.00	15.00–25.00	10.00	5.00	10.00	10.00	5.00	25.00		10.00
Pelvis	60.00	70.00	100.00	25.00	250.00	....	100.00	100.00		50.00
Femur	45.00	100.00	100.00	30.00	200.00	100.00	100.00	100.00		50.00
Patella	10.00–35.00	60.00	100.00	30.00	100.00	100.00	100.00	150.00		25.00
Tibia	25.00	25.00	50.00	20.00	100.00	50.00	50.00	....		50.00
Fibula	25.00	50.00	50.00	20.00	100.00	50.00	50.00	....		25.00
Potts	20.00–35.00	50.00	50.00	25.00	150.00	....	100.00	....		50.00
Foot	20.00	15.00–25.00	10.00	10.00	50.00	10.00	25.00	....		25.00
Toe	5.00–10.00	15.00–20.00	10.00	10.00	10.00	10.00	10.00	25.00		15.00
Compound	....	[b]	[c]	[d]	[b]	....	....	[e]		
AMPUTATIONS										
Shoulder	About 50% higher than for fractures.	100.00	150.00	55.00	150.00	100.00	100.00	300.00	....	150.00
Arm		50.00	100.00	40.00	100.00	100.00	50.00	100.00	....	100.00
Forearm		50.00	100.00	40.00	100.00	75.00	50.00	100.00	....	100.00
Hand		35.00–50.00	50.00	40.00	75.00	50.00	50.00	100.00	....	50.00
Finger		15.00–25.00	50.00	15.00	25.00	15.00	10.00	25.00	....	10.00
Hip		150.00	125.00	75.00	200.00	100.00	100.00	500.00	....	150.00
Thigh		75.00	150.00	50.00	150.00	....	100.00	250.00	....	100.00
Leg		75.00	100.00	40.00	100.00	100.00	50.00	250.00	....	75.00
Ankle		75.00	50.00	40.00	75.00	....	50.00	....	....	50.00
Foot		75.00	50.00	40.00	75.00	50.00	50.00	....	....	50.00
Toe		15.00–25.00	25.00	15.00	50.00	15.00	10.00	25.00	....	10.00
EYE										
Enucleation	50.00–75.00	50.00–75.00	50.00	40.00	100.00	....	100.00	50.00	....	50.00
Iridectomy	....	50.00	....	....	100.00	....	100.00	50.00	....	25.00
Use of giant magnet	....	10.00–25.00	50.00	....	100.00	....	....	....	....	5.00
Foreign body embedded in cornea	....	3.00–5.00	2.00	2.00	5.00	2.00	5.00	....	....	5.00
X-RAY										
Head	5.00	5.00-10.00	8.00-10.00	5.00-7.50	25.00	....	25.00	25.00	....	10.00
Chest	5.00	5.00-10.00	8.00-10.00	5.00-10.00	25.00	10.00	25.00	25.00	....	15.00
Pelvis	5.00	10.00	10.00–15.00	2.00–10.00	25.00	10.00	25.00	25.00	....	15.00
Extremity	5.00	5.00–10.00	6.00–10.00	5.00	10.00–15.00	10.00	5.00	10.00	....	10.00

[a] With dressing. [b] 50% additional. [c] Same price as amputations. [d] 25% additional. [e] 200% additional. [f] $10.00 to $25.00 additional.

IX

SELECTION OF PHYSICIAN

In all but five states[1] the employer is held liable for furnishing medical service to his injured workers, and in one of these, Ohio, self-insuring employers are charged with this responsibility. In four of these five states the employee has the right to choose his own physician. In the other state, Utah, the injured employee may select his own surgeon

> "to render treatment during period of his disability from such injury; except where the employer has provided for medical attention by contract and such contract has been posted in or about the premises. In such cases the employee will be required to report in the manner prescribed by the rule of the company."[2]

In those states where the employer must provide medical service the statute is not always clear as to how this shall be done. In California the injured worker may have a change of physician upon request, unless the employer is providing a hospital and staff that has been approved by the commission. In Wisconsin a recent amendment to the compensation law provides that the employer must submit a panel of physicians in the community from which the injured worker may select the one he wishes to treat him. In Milwaukee this panel must contain five or more names, while in other parts of the state three physicians must be selected from which to choose, provided that number is available; otherwise one or two is sufficient.

In commenting on this amendment the Wisconsin commission has said:[3]

> "This legislation is intended to satisfy in a measure the demand of injured workmen that they be permitted to select their own physician. The plan will give them something approaching a choice and at the same time preserve for the employer and insurer the opportunity to see that only the most competent physicians and surgeons are called upon to attend employees. The agitation for the right of selection by the employee developed not because of the incompetence of the physician designated by the employer, but more particularly because of conduct both in and out of hearings which the injured men construed as evidence of partiality.

[1]Massachusetts, Ohio, Rhode Island, Utah, Washington.
[2]Utah. Industrial Commission. Medical and Surgical Fee Schedule, p. 7.
[3]Note No. 25, Wisconsin Workmen's Compensation Act (with 1921 Amendments).

> The amendment requires that the physician shall be impartial, and in order that the employer and insurer may satisfy their obligation and relieve themselves from the requirement to reimburse an injured man for his expenditures for medical service, they must see to it that the physicians named on the medical panel do not establish a course of partiality that affects their right to serve on the panel. The maintenance of strict impartiality by attending physicians will accomplish more than all other agencies to satisfy injured employees with the plan of medical selection by employers."

The majority of the acts contain the provision that in case of failure or refusal of the employer to furnish medical attention or in case of emergency the worker may select his own physician, at the employer's expense. On the other hand, it is generally provided that if the employee does not accept the medical service offered by the employer and engages his own physician, he alone is responsible for payment for such services.

The law in six states[1] provides that the administering board may order a change of physician when such a course is deemed necessary. In nine states[2] the law provides that in case of emergency or other justifiable cause the employee may select his own physician, subject to the approval of the commission. Under the Connecticut and Nebraska laws, in cases of injury requiring dismemberment or injuries involving major surgical operation, the employee may designate to his employer the physician or surgeon to perform the operation.

The reason why the employer is required to select the physician, according to a Texas case,[3] is that the final result of an injury to an employee and the consequent amount of liability may often depend upon the kind of medical treatment given during the first week of the injury and for this reason the employer is presumed to have a special interest in the recovery; also because the charges for such treatment might be much less when done under a contract by the employer "than when left to be determined by the evidence, which is often conflicting, of the reasonable value of medical treatment."

A similar reason is given in a leading case[4] interpreting the Wisconsin act previous to its change by the present amendment, as follows:

> "The employer must provide medical and surgical treatment, medicine, etc., for 90 days. This provision is made

[1]Connecticut, Georgia, Minnesota, Nevada, Texas, Virginia.
[2]Alabama, Georgia, Indiana, Kentucky, Maine, Massachusetts, Minnesota, Texas, Virginia.
[3]*American Indemnity* v. *Nelson*. 201 S. W. 686.
[4]*Milwaukee* v. *Miller*. 144 N. W. 188.

for two reasons; First, as a rule, an employer is more competent to judge the efficiency of the doctor employed and to provide efficient medical and surgical treatment. Second: it is to the interest of the employer to furnish the very best medical and surgical treatment, so as to minimize the result of the injury and to secure as early a recovery as possible. The more serious the result of the injury, the more the employer must pay. Also by this means he obtains a complete knowledge of the exact condition of the injured employee."

In a Virginia case[1] a workman, after receiving first aid treatment at home by his family doctor, was able later to leave his residence but continued with his own physician instead of visiting the office of the physician provided by his employer. In deciding this case the Industrial Commission stated that the only justification an employee has in securing medical service on his own account is where the employer fails to provide, with reasonable promptitude, the service that his injury demands: "But when such employee is able to visit the office of a physician he must consult the employer's physician." Medical expense of first aid treatment only was awarded the employee in this case.

Emergencies arise which enable the employee to select his own physician at the expense of the employer[2] where medical attention usually furnished by the employer was not available at the time of accident. Also, in a Pennsylvania case[3] where an employee was directed to go to a physician some eight miles distant and in a direction opposite from his home, the board allowed him for medical attention because the employer made no provision for transportation to and from his physician and it could not be ascertained whether the physician designated would be found available when the employee would arrive.

In a leading emergency case in Michigan,[4] the employee suffered from strangulated hernia and his wife called the family physician who performed an operation immediately to save his life. The Supreme Court of Michigan in deciding this case spoke as follows:

"Unquestionably that construction of the statute is logical and the adopted rule sound which requires notice and opportunity to employer to select physician and furnish needed service during the prescribed three weeks before employee can secure same at employer's expense; but in many complications which arise in industrial activities it is not an un-

[1] *Burnett* v. *Porter Bros.* Virginia. Industrial Commission Opinions. Vol. 1, p. 20.
[2] *Guirmarin* v. *Virginia Shipbuilding Corp.* Virginia. Industrial Commission Opinions. Vol. 1, p. 150.
[3] *Pollard* v. *Pozer.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 90.
[4] *Gage* v. *Board of Control.* 172 N. W. 536.

reasonable and constrained construction of the statute, in view of its purpose, to recognize as inferable exceptions in extraordinary cases where the surrounding circumstances and critical condition of the injured party present emergencies or exigencies demanding prompt action which reasonably warrant the injured party in securing the then needed service at the employer's expense without first giving notice and opportunity to furnish or offer the same."

In a recent decision in Minnesota[1] the court required the City of Duluth to pay the expenses of an accident to a policeman who selected a physician to treat his injury while at the same time the city had a physician under contract to treat its employees. Under the Minnesota law the employer is charged with providing all necessary medical, surgical and hospital expenses for 90 days, but in sum not to exceed $100. In the course of the decision the court said:

"The statute is plain and unambiguous and imposes upon the employer the obligation to furnish medical aid to an injured employee, to the extent there stated, and if he is unable or refuses to do so, imposes liability for the reasonable value of the services rendered by a physician employed by or on behalf of the injured employee. To justify a recovery of the reasonable value of the services of a physician called by the employee, it must appear either that the employer was unable to furnish one or that he refused to do so. Upon this the statute leaves no doubt, but the requirements thereof were not met by plaintiff in this case. There can be no claim that the city was unable to furnish the needed medical attention.....Neither is there any showing of a request by the plaintiff for his services, and no occasion was presented for volunteer action on his part. There was, therefore, no refusal by city to furnish the necessary medical attention. Plaintiff voluntarily chose his own physician, on the apparent theory that he had a right to do so at the expense of the city. He proceeded advisedly in the matter, for his injury was not of a character to render him mentally incompetent.

"It follows then that plaintiff is not entitled to recover the reasonable value of the services of the physician so called. But we are of the opinion that the statute should not be construed to impose upon the employee unqualified obligation to accept the physician selected by the employer, or forfeit the right of reimbursement there given. It often happens, a situation perhaps more or less general, that the employee has a family physician to whom he prefers to turn in case of injury or sickness rather than accept the services of another with whom he has no acquaintance, or in whom perchance he has no confidence. In that situation he should have the option or unquestioned right to choose his medical attendant or accept the one tendered him by the employer but within the limits of liability on the part of the employer imposed by the

[1] *Lading* v. *City of Duluth*, 190 N. W. 981.

statute. The statute contains no language unconditionally requiring the latter to accept the physician tendered him or relinquish the right of reimbursement altogether, and we construe it to give him that option; and, when exercised in good faith, to entitle him to reimbursement to the extent provided by the statute.....

"It follows that plaintiff is entitled to reimbursement for the services of the physician called by him to the extent of $100 and no more."

The Wisconsin commission[1] held that the facts justified an award for medical service although the specialist employed was not furnished by the employer. The workman received an injury to his eye and becoming dissatisfied with the employer's physician on account of inattention sought an eye specialist who removed a particle of steel from the eye.

A New York decision[2] maintains that:

"the employer cannot make an unreasonable selection [of physician]. There may be instances where the employee would have a right to be consulted and a reasonable and proper deference paid to his wishes."

Previous to the amendment to the Wisconsin law establishing a panel of physicians, the court in discussing the right of the employee to designate the physician said:[3]

"Competence of an injured employee to procure medical and surgical treatment or for such to be procured in his behalf at the expense of the employer, under the Workmen's Compensation Act, exists for the reasonable time after injury required for such employee to afford the employer opportunity to exercise such privilege, but revives and dates back to the time of suspension if necessary if the employer unreasonably neglects or refuses to exercise such privilege."

The Connecticut commissioner, 2nd District,[4] in January, 1921, awarded compensation for disability, but required the employee to pay his doctor bill since he had received medical care of his own choosing. The same ruling held in a Pennsylvania case.[5]

There are in the law of four states[6] certain provisions for giving the injured workman a voice in the selection of physician or surgeon who is to treat him. The Minnesota act[7] stipulates that

[1] *Kloes* v. *Allis Chalmers*. Wisconsin. Industrial Commission. 7th Annual Report, p. 29.
[2] *Keigher* v. *General Electric Co*. 173 App. Div. 207.
[3] *Milwaukee* v. *Miller*. 144 N. W. 188.
[4] *Ferro* v. *Archibald Torrance*. *Weekly Underwriter*. Vol. 105, No. 12, September 17, 1921, p. 539.
[5] *Haxton* v. *O'Brien Brothers and Rees*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 6, p. 285.
[6] Minnesota, Connecticut, Maine, Nebraska.
[7] General Laws 1921. Chap. 82, Sec. 19.

> "the Commission may upon petition of an employee and a proper showing as cause therefor order a change of physicians and designate a physician suggested by the injured employee or by the Commission itself, and in such case the expense thereof shall be borne by the employer."

Connecticut and Maine have similar provisions. Under the Nebraska law, "in cases of injury requiring dismemberment or injuries involving major surgical operation, the employee may designate to his employer the physician or surgeon to perform the operation."[1] The acts of Pennsylvania and Delaware permit the employee to refuse medical treatment offered by employer and procure it for himself at his own expense, but the employer will not be liable for any injury or increased incapacity resulting from such refusal.

The Massachusetts Workmen's Compensation Act has been changed to allow the employee to select his own physician. The California act places the choice of physician in the employer's hands; but if the employee so requests he must be furnished with a panel of three or more physicians competent to treat the particular case, except in those cases where the employer conducts a hospital that has been approved by the commission. In this latter case, the injured employee must accept the services of the hospital staff.

In those states where the employer is made responsible for furnishing medical, surgical and hospital care, this responsibility may be assumed by the insurance company which carries the risk of the employer. In these states employees are required to accept the treatment offered by the employer, or if they choose their own physician they are made responsible for payment for his services and the employer is relieved of this responsibility. In certain cases, however, it has been necessary for the injured employee to secure medical attention before the employer was able to supply a physician. Later, when the employer's physician was available, the employee was asked to change from the physician first engaged to that supplied by the employer or insurance company, regardless of the fact that the attending physician was rendering satisfactory service.

Four states[2] report that they do not permit employers or insurance companies to force such a change of physician unless the service being rendered is unsatisfactory.

[1]Workmen's Compensation Law (Amended) 1921, Sec. 111.
[2]Idaho, Illinois, Montana, Oklahoma.

On the other hand, six states[1] recognize the right of the employer to designate the attending physician, inasmuch as he is charged by law with this responsibility even though satisfactory service is rendered by a physician of the employee's own selection. In Virginia such changes can be made only after the permission of the commission is secured.

[1]Iowa, Kentucky, Minnesota, Nebraska, South Dakota, Utah.

X

MEDICAL SERVICE

With the exception of Arizona and New Hampshire, the compensation laws of other states expressly provide for the medical treatment of injured workers. In these two states the amount of compensation payable in cases of injury is stipulated but there is no reference to the kind and amount of medical service that shall be given.

In all but five states[1] the employer is charged by law with the provision of medical and surgical service to the injured workers.

What Is Included Under Medical Service

Physician

The general rule among various states is that fees for medical attention will not be granted unless such attention is given by or under the supervision of one duly authorized to practice medicine or surgery. This was the finding in Ohio[2] and also in Connecticut,[3] where the commissioner, 1st District, held that the employer was not liable for medical treatment, since the employee in selecting his physician failed to choose a competent one, but consulted instead an unlicensed practitioner describing himself as a "Doctor of Medical Electricity," having a diploma from a school of Mechano-Therapy. In Massachusetts[4] where the injured employee engaged a masseuse, compensation for services was denied, as "Massage was performed solely upon employee's request and not as a part of treatment by a physician." This decision continues to construe medical services as "assistance rendered by a physician or under his direction and control." Likewise in California the commission[5] refused to reimburse the employee for treatment by a Chinese herb practitioner; not being a duly licensed physician or surgeon, he could not render medical or surgical treatment within the meaning of the act.

[1]Massachusetts, Ohio, Rhode Island, Utah, Washington.
[2]*In re Horvat.* Ohio. Bulletin of the Industrial Commission. Vol. 1, No. 7, p. 155.
[3]*Carpelo* v. *National Iron Works.* Connecticut. Compensation Decisions. Vol. 3, p. 372.
[4]*In re Golden.* 132 N. E. 726.
[5]*Knock* v. *Reliance Gas Regulator.* California. Industrial Accident Commission Decisions. Vol. 4, p. 181.

The Iowa Workmen's Compensation Service has ruled[1] that an osteopath does not furnish medical or surgical service within the meaning of the Iowa act, and an employer is not required to pay for treatment of that character, it being service other than that required by law. Since this ruling was made, the Iowa legislature has legalized the practice of osteopathy in the following provisions:[2]

> "Words as physician, regular practicing physician, doctor, doctor of medicine, regular practitioner, medical practitioner, medical school, medical college, and their equivalents, wheresoever found in any existing law or statute, shall, both as to privilege, duty and obligation, be enlarged to include osteopathic physicians and osteopathic physicians and surgeons to like effects as if the words 'osteopathic physician' or 'osteopathic physician and surgeon' were written out in such statute."

In this investigation there were found, following the passage of this law, no decisions of the Iowa Commissioner or Iowa courts in which this question was discussed.

In Connecticut[3] where employee sought treatment at the hands of an osteopath on account of a sprained right foot, it was decided that an osteopath was not included under the workmen's compensation act, which stipulates "physician and surgeon," and if the injured employee preferred another kind of treatment to that ordinarily deemed proper, it must be at his own risk and expense.

Contrary to the above, in California the Supreme Court[4] sustained an award of the commission covering services by an osteopath to whom the employee was directed by his physician. The Wisconsin act[5] alone provides "Christian Science treatment in lieu of medical treatment at the option of the employee, but the employer may elect by filing written notice not to be subject to this provision." Under this provision of the Wisconsin law, compensation was allowed for death following a slight bruise on the shin, which became infected.[6] The contention by the employer, that death would not have resulted had proper medical treatment been followed instead of relying on prayer as a cure, was not upheld by the commission.

[1] *Smith* v. *Park Coal Co. Weekly Underwriter.* Vol. 91, No. 10, Sept. 15, 1914, p. 269.
[2] Laws of Iowa, 1921, Chap. 77, Sec. 15.
[3] *Spain* v. *Metropolitan Furniture Co.* Connecticut. Compensation Decisions. Vol. 3, p. 37.
[4] *Leadbettor* v. *Industrial Commission.* 177 Pacific 449.
[5] Sec. 2394–9. Subd. 1.
[6] *Freygang* v. *Weiner Co. Weekly Underwriter.* Vol. 101, No. 7, August 16, 1919, p. 252.

However, in Massachusetts,[1] where a $14 claim was presented for services rendered by a Christian Science practitioner, whose treatment consisted solely of prayer, the board dismissed the claim, holding that prayer is a charge on the employer only when rendered under the section of the compensation act which provides for payment of funeral expenses.

Under the Colorado act an employee, upon proper showing to the Industrial Commission, may obtain its permission to select his own physician and in any non-surgical case the employee with such permission may procure any non-medical treatment recognized by the state law as legal. The practitioner administering such non-medical treatment is entitled to receive such fees therefor as may be fixed by the commission under the medical provisions of the act.[2]

Nurses

Considerable controversy has arisen over the question whether members of a family attending an injured employee are entitled to compensation for their services. In a leading case in Wisconsin[3] an award for nursing service was denied for the reason that such services were voluntarily performed by a relative of the insured, residing in the same house, and without promise or expectation of compensation. New York requires that services of a nurse will be compensated, but there must be proof of payment, no recovery being permitted for voluntary service.[4] A Minnesota Court[5] held that compensation could not be recovered for services of wife as nurse, such services being gratuitous. The Vermont Commissioner of Industries[6] denied the claim of a mother for nursing her son because such services were not contemplated under the act. The Michigan commissioner ruled that compensation for nursing by members of the same family, not professional nurses, would not be allowed. Ohio[7] has a similar rule. In accordance with this rule, in Oklahoma there was objection by the employer to paying for daughter's services

[1] *Welsh* v. *Boston Elevated R.R. Weekly Underwriter.* Vol. 101, No. 1, July 5, 1919, p. 31.

[2] The Colorado statute, in addition to physicians and surgeons, licenses chiropodists and chiropractors. The practice of Christian Science, with or without compensation, is also permitted.

[3] *Milwaukee* v. *Miller.* 144 N. W. 188.

[4] *Tirre* v. *Bush Terminal Co.* 172 App. Div. 386.

[5] *Danielson* v. *Peterson.* Minnesota. Department of Labor and Industries. Bulletin No. 17, p. 159.

[6] *McLaughlin* v. *Lincoln Iron Works. Weekly Underwriter.* Vol. 96, No. 4, January 27, 1917, p. 134.

[7] *In re Burns.* Ohio. Bulletin of the Industrial Commission. Vol. 1, No. 7, p. 5.

as nurse, but the Industrial Commission[1] allowed her bill of $25 per week because she was a professional nurse earning regularly $35 per week.

Under conditions where the wife quitted her employment to nurse her injured husband, the Colorado commission awarded her the amount of wages lost as a reasonable payment for her work.[2] Also a Connecticut commissioner[3] awarded $15 per week to a mother and sister for nursing services because they were obliged to secure extra help to take care of the housework, and their services were probably more beneficial to the injured man than those of any other nurse. A worker who had given up his work to nurse an injured brother under a physician's direction was awarded payment by the New York board,[4] and in a similar case the Maine commission ruled that a mother, who occasionally worked and had remained at home to nurse her son, was entitled to payment for her service; but the customary wage she received in her regular employment was not held the basis of the award and she was granted $3 per day as the reasonable salary of an inexperienced nurse.[5]

A different set of circumstances came before the Connecticut commissioner, 5th District,[6] where the injured was removed from the hospital to the home of his daughter at the request of the employer. The daughter was given a reasonable payment for nursing because her services were necessary and it would have cost the employer far more if such service had been procured in any other way.

The Utah commission[7] allowed pay as a nurse to a wife who performed the services of a nurse, carrying out the instructions of the physician and devoting her entire time to such service.

An interesting case was decided by the California commission.[8] An employee fractured his right arm and as there was no hospital in the vicinity, the boarding house keeper cared for

[1]*Harding* v. *Galbraith.* Oklahoma. Industrial Commission Reports. Vol. 2, p. 217.
[2]*Jones* v. *Peters. Weekly Underwriter.* Vol. 100, No. 20, May 17, 1919. p. 766.
[3]*Beebe* v. *Chase Rolling Mill Co.* Connecticut. Compensation Decisions. Vol. 2, p. 124.
[4]*Brown* v. *Walton Water Co.* New York. Department of Labor. Special Bulletin No. 114, p. 11.
[5]*Campbell* v. *Cummings. Weekly Underwriter.* Vol. 103, No. 22, November 27, 1920, p. 874.
[6]*Johnstone* v. *Waterbury Clock Co. Weekly Underwriter.* Vol. 106, No. 8, February 25, 1922, p. 411.
[7]*Fowler* v. *Utah Fire Clay Co. Weekly Underwriter.* Vol. 98. No. 15, April 13, 1918, p. 508.
[8]*Casler* v. *Byrne.* California. Industrial Accident Commission. Decisions. Vol. 5, p. 224.

him. She was allowed pay for board, lodging and nursing for the reasonable value of same during the period when hospital service would have been necessary had such been available.

Medicines and Supplies

The compensation laws in the various states specify that necessary medical, surgical and hospital treatment shall be given the injured worker for a definite period. In addition, the laws of some of the states specify the inclusion of crutches, artificial members and such other appliances as may reasonably be needed to relieve the effects of the injury. The Oregon law[1] provides that in cases of injury resulting in the loss of a member the commission shall supply the injured person with artificial limbs

> "of the best quality but said artificial leg or arm shall be and remain the property of the state of Oregon and shall be so stamped and identified that it cannot be sold by the possessor. The injured workman shall have the right to select such artificial leg or arm subject to the approval of the commission."

The various workmen's compensation acts, in expressing the scope of medical treatment, vary from the simple phrase "medical attention" to the more elaborate statement:

> "such medical, surgical and hospital treatment, including nursing, medicines, medical and surgical supplies and crutches, and apparatus, including artificial members, as may reasonably be required to relieve the effects of the injury."

However, the interpretation of the medical requirements has been broad in all states so as to provide the necessary relief for the injured workman, and the commissions have at times read the more concise statements to include as much as the longer and more elaborate ones.

The Workmen's Compensation Act of Virginia provides for "medical treatment." In a case coming before the commission[2] these words were interpreted to include medicines prescribed by the attending physician, and where the question of providing a nurse came before the same commission[3] the expense was allowed when the serious nature of the case made such attention expedient. Hospital service has also been compensated for in Virginia as coming under "medical attention," but where the employee engaged a private room in the hospital instead of accepting a cot in a ward as provided by the employer, and

[1]Laws 1921, Chap. 311, Sec. 6628.

[2]*Harris* v. *Virginia Hide and Fur Co.* Virginia. Industrial Commission Opinions. Vol. 1, p. 27.

[3]*Lushy* v. *Virginia Shipbuilding Corp.* Virginia. Industrial Commission Opinions. Vol. 1, p. 146.

neither injuries nor circumstances justified such election, the commission decided that the additional expense must be borne by the employee.[1]

The Indiana Supreme Court held[2] that the attending physician may determine the necessary surgical and hospital service and supplies. In Connecticut[3] the term "surgical aid" is not limited to the personal service of the surgeon but includes splints, crutches, artificial limbs, artificial eyes, etc. However, in Wisconsin[4] where an employee became infected with anthrax, was sent to a hospital for treatment and there all his clothing was taken and burned, claim was made for loss of clothing as a part of medical treatment; but the commission could not approve this claim because it appeared that the destruction of the clothes was carried out in the interests of the public safety.

In Connecticut[5] transportation for each visit to the doctor was included in an award as medical attention.

Dental Work

Dental attention has not only been compensated for in Colorado[6] but insisted upon to the extent that compensation for disability would be suspended during refusal to accept treatment. The case involved an injury aggravating the employee's heart action, and medical testimony alleged that treatment for pyorrhea would afford relief.

In Pennsylvania[7] in an accident resulting in injury to the teeth, dental expense was allowed and the board held that the term "surgical and medical services, medicines and supplies" includes all services necessary to repair a physical injury, whether rendered by a physician, surgeon or dentist.

A similar ruling was made by the Iowa commissioner[8] and is general throughout the various states.

In California, however, where the employee in injuring his

[1]*Guirmarin* v. *Virginia Shipbuilding Corp.* Virginia. Industrial Commission Opinions. Vol. 1, p. 150.
[2]*In re Henderson.* 116 N. E. 315.
[3]*Olmstead* v. *Lamphier.* 104 Atlantic 488.
[4]*Wolta* v. *Troestat. Weekly Underwriter.* Vol. 106, No. 16, April 22, 1922, p. 848.
[5]*Sonocchio* v. *American Sumatra Tobacco Co. Weekly Underwriter.* Vol. 100, No. 5, February 1, 1919, p. 171.
[6]*Ebbert* v. *Swift & Co. Weekly Underwriter.* Vol. 96, No. 16, April 21, 1917, p. 540.
[7]*Ruddick* v. *Jones and Laughlin Steel Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 18.
[8]*Stephens* v. *Plymouth Gypsum Co. Weekly Underwriter.* Vol. 102, No. 26, June 26, 1920, p. 1096.

chin broke a plate of false teeth, the commission[1] held the employer was not liable for a new set of false teeth. The commission held that the term "injury" as used in the California act meant injury to the physical structure of the body and as the plate was removable at will and was merely an item of personal property, there could be no recovery under the workmen's compensation act.

Hospital Contracts

In certain of the western states[2] it is frequently the custom for industries located in isolated sections to furnish complete hospital equipment for the care and treatment of their employees. The workers are usually assessed at the rate of $1 per month for such treatment as they require. This assessment is payable whether the worker is injured or not.

The industrial commissions in these states have recognized this arrangement and have adopted rules governing the relation of these hospitals to the treatment of cases coming under the workmen's compensation law. In general, these hospitals must meet certain minimum requirements of equipment and personnel before they are approved by the commission. In Montana such mutual hospital agreements as mentioned must provide for medical, hospital and surgical attendance except for venereal diseases and intoxication. Employers in this state cannot make a profit from such hospital contracts, neither are they held liable for malpractice of the physicians in such hospitals. In Oregon, which has a monopolistic state insurance fund, all medical, surgical and hospital attendance is either provided by the commission or supervised by it. In Utah, hospitals maintained jointly by employers and employees are subject to supervision of the commission.

Under the Washington law, which is also a monopolistic state insurance law, employers and employees may enter into a contract to furnish medical, surgical and hospital care to the injured, each contributing 50% of the cost. Such contracts, to be valid, must be approved by the State Medical Aid Board. While such contracts are in force employers pay into the state fund only 10% of the amount paid when no such contract exists, and of this 10%, employees pay one-half.

[1]*DeWitt v. California Highway Commission.* California. Industrial Accident Commission. Decisions. Vol. 5, p. 140.

[2]California, Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington.

In King County, Washington, the medical society has established what is known as the Industrial Service Bureau[1] through which such members of the society as care to do so are able, by registering with the bureau, to treat compensation cases. About one-half the membership is registered for such work. Usually the calls are apportioned among those registered, but should someone outside the list be called, he always serves. When no preference for physician is expressed by the injured party (there is free choice of physician in Washington) a physician is sent from a rotating list always available in the central office. Members of the medical society who are not members of the bureau but who are recognized as specialists in various lines are also called upon, when necessary, to treat the injured person.

The service which this organization renders may be summarized as follows:

> "1. A twenty-four hour service through a telephone exchange with five trunk lines employing three operators;
> 2. A choice of any physician from the bureau's list of doctors classified as to their specialties;
> 3. In the event that the doctor chosen is not immediately available, an emergency service is furnished and the physician selected by the injured workman subsequently takes charge of the case; if no preference is expressed, the bureau furnishes a doctor from a rotating list of physicians who have agreed to be on call for that day;
> 4. A fully equipped first aid station with a graduate nurse in charge in each plant or neighboring group of plants employing one thousand or more workmen;
> 5. Consultation is furnished in all serious cases; consultation when requested, and consultation covering the various specialties whenever indicated;
> 6. First aid cabinets with free lectures weekly to designated first aid men in the various industrial plants;
> 7. Free ambulance and hospital care when needed;
> 8. Private nurses and private hospital rooms in serious cases when advised by the attending physician."

Through the operation of this bureau every injured worker has free choice of physician and in addition the consulting service of needed specialists without extra charge. This latter privilege is made possible by the fact that the bureau operates under contract with the industries, the employer and employee both contributing to the medical aid fund established by law in that state. It is said that this organization is the only one of its kind in the United States.

[1]Dudley, Homer D. "Cooperative Medical Aid for Injured Workmen." *The Nation's Health.* Vol. 4, No. 4, April, 1922, p. 231.

In addition to the statutory provisions for furnishing medical, surgical and hospital care to injured workers, a practice has grown up in certain sections of the country by which groups of physicians specialize in the treatment of industrial injuries. The California commission reports that there are a number of physicians in that state who have equipped their offices for doing industrial work and by arrangement with the insurance carriers and employers, undertake to treat such injuries as are sent to them. In New York, this same method is followed and in one or more cases elaborate dispensaries have been equipped and organizations have been developed for the handling of injuries resulting in compensation payments.

The operation of such dispensaries in some instances has been the cause of much criticism from members of the medical profession. Political interference, unethical practices and inferior medical service have been charged against those who conduct these clinics. On the other hand, it is said by those friendly to this type of work that these clinics are furnishing a service that is satisfactory alike to the injured workman and the employer or insurance carrier. It is, however, not within the scope of this report to attempt an evaluation of such work either from the standpoint of the worker, the employer or the medical profession.

Relation of Physicians to Compensation Laws

As a general rule, those administering the compensation laws have taken the position that, in order for the employer properly to distribute the cost of compensation over the cost of producing and marketing his product, some fairly definite measure of the cost of accidents should be established. We see this in the provisions for the payment of compensation for a definite number of weeks for different types of injuries, and it is with this same idea in mind that a limit has been placed upon the fees which will be allowed physicians for the treatment of these cases. In many states the provision is made that, in cases of serious injury, where the allotted fee will not properly cover the treatment of the case, additional expense may be authorized.

When considering the relation of the medical profession to the operation of workmen's compensation laws, it might be well to point out that the enactment of such laws introduced a new element into the relations of the physician to the community. These laws make mandatory the providing of necessary medical,

surgical and hospital service to injured workers. They also either directly limit expense for which the employer is liable for such treatment or empower the administrative bodies to pass upon all such fees. While the law requires that medical service shall be furnished by the employer, as a matter of course, this requires the services of a physician. This introduces a problem which has not heretofore been in evidence in the activities of the medical practitioner. Being the only one in the community capable of rendering such service, there is imposed upon him the duty of contributing from his skill and experience to the treatment of such cases; and, as the compensation for such treatment is definitely limited or restricted by law in many states, it becomes necessary for the physician doing this work to readjust his conception of medical ethics to this new social obligation which is demanded of him.

Duty of Employer to Furnish Medical Treatment

Although five states[1] permit the injured employee to select his own physician at the expense of the employer, according to the general statutory provisions of the various workmen's compensation acts, it becomes not only a privilege but the duty of the employer to furnish medical treatment when he has notice of an accident. This statement should be qualified by pointing out the rule in Ohio[2] that

> "If an employer carrying his own insurance is permitted by the Industrial Commission to furnish medical attention by his regular physicians to an injured employee, and further, if the Commission authorizes such service to be exclusive, such employer cannot be compelled to pay for medical services rendered by physicians other than the regularly appointed physicians of the employer."

The question of the employer's obligation arose in an Indiana case[3] where the employing company admitted that it had notice of the accident and that its doctor had given first aid, but asserted that the employee did not return for further treatment. The employer claimed, therefore, that it had the right to assume that the employee had recovered and maintained that it was entitled to further notice when his condition became so serious that he was confined to his bed. The court, however, ruled that:

> "The requirement of this statute implies something more than passive willingness on the part of employer to respond to

[1]Massachusetts, Ohio, Rhode Island, Utah, Washington.
[2]Opinions of Attorney General, Vol. 2, 1914, p. 1556.
[3]*Bucyrus Company* v. *Reisinger.* 133 N. E. 516.

a demand or request for medical aid. It implies some degree of active effort to bring the injured employee the required humanitarian relief. A person injured by an accident is presumed to be under more or less physical disability, and not in a normal condition so as to be able to look out for himself and his needs. The statute requiring the employer to furnish medical services is mandatory in form. Having had knowledge of the accident and injury, and knowing that appellee needed further treatment and having failed to make any effort to see that he got the necessary medical care, appellant is in no position to complain of the fact that it was not notified when appellee's condition became serious as the result of the accident and injury of which it had actual knowledge."

The same reasoning is expressed and opinion held by the Supreme Judicial Court of Massachusetts[1] where an illiterate foreigner reported his injury to the foreman and was not advised as to his right to medical attention, nor was an effort made to furnish the same. In this case it was held that he was entitled to recover the amount paid by him for medical attendance. The court said:

"The word 'furnish' imports something more than a passing willingness to respond to a demand. It implies some degree of active effort to bring to the injured person the required humanitarian relief."

Regarding the sufficiency of posting notices indicating where the employee may apply for medical assistance, the court continues:

"But in the case at bar the notice appears not to have been of a character to challenge attention, although perhaps it might have been enough if the employee had been able to read the English language. The insurer has readily accessible means for ascertaining the nationality of employees insured by it and their degree of intelligence. If among them are those who cannot speak the English language, this circumstance requires greater effort on its part in order to comply with the statute."

The Illinois commission[2] holds that "it is the first duty of the employer to furnish the necessary medical aid. It is not the duty of the employee to demand it." And in Connecticut[3] where an employer suggested that the employee consult a physician regarding his injury and the employee delayed two weeks before abandoning his home treatment, the contention of the employer that the period of disability would have been shortened had the employee obeyed his suggestion to consult a physician at once

[1] *In re Panasuk.* 105 N. E. 368.
[2] *Olson* v. *Hillman.* Illinois. Industrial Board. Bulletin No. 1, p. 121.
[3] *Rainey* v. *Tunnel Coal Co.* 105 Atlantic 333.

was not accepted by the Supreme Court, because the employer had not offered to furnish or pay for such services. Similarly, it was held in Maine[1] that delay of the employee in seeking medical attention did not constitute such negligence as to remove the obligation of compensation. It was the duty of the employer to have brought medical attention to the employee and not merely to suggest it. Likewise in California,[2] an employee in a café who cut his finger when opening a can of fruit, notified his employer of the injury but the latter failed to offer or furnish medical services. Because of the rapid progress of infection and his delay and uncertainty what to do, it became necessary to amputate his arm to save his life. The employer was held liable for the resulting disability because of his neglect to furnish medical treatment promptly. The delay in seeking medical treatment on the part of the employee under the circumstances was not wilful negligence and did not defeat his right to compensation.

Because of the working of the statute a contrary rule holds in New York.[3] An award of the board was reversed because the injured employee did not request the employer to furnish medical aid, the statute expressly making such a request a prerequisite to a claim by an employee against his employer. The New York rule is also clearly set forth in another case[4] in which the court said:

> "In many cases the nature of the injury is such that the need for particular medical or surgical or other treatment is apparent and may be imperative, but the injured employee, by reason of his injury, may not be physically conscious of that fact or in any condition to make a request therefor. In such cases the statute requires the employer to make proper provision for such treatment without waiting for a request of the employee. In other cases the necessity or propriety of medical, surgical or hospital service may not be apparent or obvious but it may nevertheless be necessary and proper and in such case the employee must make the request in order to bring the reasonableness or the propriety of such attendance or service home to the employer."

Time and Amount of Medical Service

All the compensation laws except two[5] contain specific requirements as to the length of time free medical service must be

[1] *Coombs* v. *State Highway Commission. Weekly Underwriter.* Vol. 101, No. 21 November 22, 1919, p. 774.
[2] *Sams* v. *Komas & Dorros.* California. Industrial Accident Commission. Decisions. Vol. 2, p. 203.
[3] *Goldflam* v. *Kazemier.* 181 App. Div. 140.
[4] *Keigher* v. *General Electric Co.* 173 App. Div. 207.
[5] Arizona and New Hampshire.

furnished to the injured worker, also as to the amount of fees to which the attending physician is entitled. The present legal requirements of the various states are set forth in the accompanying table.

These legal provisions fall into three groups: (1) those providing for unlimited medical service, both as to time and amount; (2) those in which this service is limited, but which may in unusual cases be extended at the option of the commission; (3) those in which no extension is provided for beyond the limits mentioned in the law.

It is worthy of note that in many of the states the tendency is to increase the length of time during which medical service will be supplied, and in fourteen states what is known as "un-

TABLE 8: LIMITS OF FREE MEDICAL SERVICE UNDER WORKMEN'S COMPENSATION ACTS

(National Industrial Conference Board)

State	Time	Amount	State	Time	Amount
Alabama	60 days	$100	New Jersey	[a]	[a]
Arizona	No provisions		New Hampshire	No provisions	
California	[a]	[a]	New Mexico	14 days	$50
Colorado	60 days	$200[b]	New York	[a]	[a]
Connecticut	[a]	[a]	North Dakota	[a]	[a]
Delaware	30 days	$100[c]	Ohio	[a]	$200[g]
Georgia	30 days	$100	Oklahoma	60 days	$100[g]
Idaho	[a]	[a]	Oregon	[a]	$250[i]
Illinois	8 weeks	$200[d]	Pennsylvania	30 days	$100[j]
Indiana	30 days[e]	[a]	Rhode Island	8 weeks	$200
Iowa	4 weeks	$100[f]	South Dakota	12 weeks	$150
Kansas	50 days	$150	Tennessee	30 days	$100
Kentucky	90 days	$100	Texas	2 weeks	[a]
Louisiana	[a]	$150	Utah	[a]	$150
Maine	30 days[g]	$100[g]	Vermont	14 days	$100
Maryland	[a]	$300	Virginia	60 days	[a]
Massachusetts	2 weeks[g]	[a]	Washington	During period of comp. paym't	
Michigan	90 days	[a]	West Virginia	[a]	$150[k]
Minnesota	90 days	$100[g]	Wisconsin	90 days[g]	[a]
Montana	2 weeks	$100	Wyoming	[a]	$200
Nebraska	[a]	[a]			
Nevada	90 days[h]	[a]			

[a] Signifies unlimited service.
[b] Also $100 for dental service.
[c] Additional service upon application approved by the board.
[d] Necessary additional expense in hospital cases.
[e] Additional thirty days may be allowed by the board.
[f] Additional $100 in exceptional cases.
[g] Limits extended at discretion of commission in unusual cases.
[h] May be extended to one year by commission.
[i] Limits $100 for hospital accommodation, $100 for medical and surgical service and $50 for medicines and supplies, including transportation.
[j] In addition to the cost of hospital service for thirty days.
[k] Increased to $300 in special cases.

limited" service as to time is now provided. Eleven of the laws also contain the provision that in severe cases the time and amount of medical service may be extended at the discretion of the governing body. Commissions, employers and insurance carriers are realizing that the best in medical service is cheapest in the end, as competent and adequate treatment of injuries returns the employee to his work in the shortest time and in the best possible condition, thus reducing to a minimum the amount of compensation to be paid.

The laws in eleven of the states are still inelastic regarding the time during which the employer is liable for medical services and the amount the physician is entitled to receive.

In the jursidictions where the period of medical treatment is strictly limited by law, the courts and commissions have been obliged to make some distinction in interpreting the law. In Indiana[1] it was held that where the injury is treated directly after the accident the statutory period of furnishing medical treatment to an employee begins at time of accident, and medical expenses sustained after the termination of the period are to be paid by the injured employee. Similarly in a California decision[2] involving the element of wrong diagnosis, the commission maintained that it had no power to require proper medical treatment after the 90-day period[3] where the employee was treated from the date of accident, although there had been a confusion in treatment of the patient owing to uncertainty as to the nature and extent of the injury. In Wisconsin the commission held[4] that where the employee sustained an accidental hernia and the employer neglected to furnish medical and hospital attention, the employee was entitled to an operation at the employer's expense to remove his disability, even though the 90-day period had elapsed.

Sometimes an injury will not manifest itself at the time of accident and in some jurisdictions the rule has been established that the period for medical attention does not begin at the time of accident, but at the time of injury, interpreting injury as

[1] *Shumaker* v. *Kindrew.* 120 N. E. 722.

[2] *Johnson* v. *Leonard and Day.* California. Industrial Accident Commission. Decisions. Vol. 1, p. 560.

[3] Amendment to California Act, Laws of 1919, Chap. 471, now gives unlimited medical service.

[4] *Knutzen* v. *Western Express Co.* Wisconsin. Industrial Commission. 5th Annual Report, p. 34.

the "effect of accident" and at the time when disability develops requiring medical and hospital service.[1]

In Michigan the Supreme Court held[2] that "accident produces injury and in point of time they are concurrent," so that a disability manifesting itself after the expiration of the ninety-day period for medical attention, although clearly due to the accident, was entitled to no such treatment. The Supreme Court of Maine[3] made the same interpretation of their statute, reversing an award of the commission in which they said:

> "The plain language of the statute restricts the period to the first two weeks after the injury and holds date of accident was when injury occurred even though disability did not immediately develop."

The Maine legislature later amended the law so that it now covers a period of thirty days and specifically states, "In case the incapacity does not begin at the time of accident the thirty day period shall commence at the time such incapacity begins."[4]

However, the statutory period does not prevent the employer from voluntarily providing medical treatment after its expiration. That he may make himself liable for entire treatment is seen in an Indiana case[5] where the employer directed the physician to take employee to a hospital and give him the best possible treatment. Such a statement was held sufficient authority for the physician to continue the treatment after the 30-day period, and the award of the commission covering the physician's bill for 87 days treatment was affirmed by the Supreme Court.

The limit of expense to which an employer is required to go raises similar questions to those involved in the period of treatment. Where an employer requested a physician to take care of the injured workman and assured him that he would be paid for his services, a bill for $325 was presented, although the Michigan law fixes the limit of employers' liability for medical service at $200. The Supreme Court of the state[6] held that by

[1]Connecticut. *Barton* v. *N. Y., N. H., & H. Ry.* Connecticut. Compensation Decisions. Vol. I, p. 227
Illinois. *Chicago-Sandoval Coal Co.* v. *Industrial Commission.* 294 Ill. 351.
Indiana. *In re McCaskey.* 117 N. E. 268.
Nebraska. *Johansen* v. *Union Stockyards.* 156 N. W. 511.
Pennsylvania. *Bechtel* v. *Bodenstein.* Pennsylvania Compensation Board Decisions. Vol. I, p. 19.
Wisconsin. *Peterson* v. *Nelson & Polk.* Wisconsin Industrial Commission. 6th Annual Report, p. 28.
[2]*Cooke* v. *Holland Furnace Co.* 166 N. W. 1013.
[3]*In re McKenna.* 103 Atlantic 69.
[4]Public Laws 1921, Chap. 222, Sec. 10.
[5]*In re Meyers.* 116 N. E. 314.
[6]*Collins* v. *Joyce.* 178 N. W. 503.

the employer's agreement to pay he had obligated himself for the full amount. The fixed liability of the law is not the limit if the employer contracts to pay more.

The Massachusetts law provides that in unusual cases medical service may be extended beyond the limits imposed both as to time and amount. The interpretation as to what constitutes an unusual case has been given as follows:[1]

> "A case may be unusual because the nature of the injury, its particular location and its extensiveness necessarily entail a prolonged disability; that is, longer than the usual. It may be unusual because of any interruption of convalescence of such a nature as not to occur commonly in that particular class of cases and because it is likely, unless specially treated, to jeopardize the probability of a speedy recovery from a medical standpoint and the employee's early restoration to his position as a wage earner. The employee's status with reference to his support of others is a factor which may be taken into consideration in determining whether a case is unusual.... Under the unusual case classification may come major injuries, compound fractures, injuries followed by sepsis, some major amputations and operations, serious pelvic and back injuries and injuries requiring special apparatus or the services of specialists."

[1]*Brady* v. *U. S. Casualty Company*. Massachusetts. Industrial Accident Board. 6th Annual Report, p. 55.

XI

MEDICAL EXAMINATIONS

Physical examinations for the purpose of determining the nature and extent of injury and also the probable period of disability of injured workers are provided for in practically all of the workmen's compensation laws. Examinations are also necessary to ascertain the extent of recovery, whether the earning capacity is restored in full or in part, and whether the disability will continue permanently. For this purpose a competent physician or surgeon is required, usually designated in the acts as one duly authorized to practice in the state.

The acts of all the states with the exception of West Virginia make provision for medical examination, and although somewhat at variance, they all agree that the employee who refuses to submit to an examination shall be penalized, the usual method being to suspend benefits and even to declare forfeit the right to compensation payments for the period of such refusal.

In eighteen states[1] injured employees must submit to examination at the request of the employer. Eleven states[2] give the authority for ordering the physical examination to the commission. According to the provision of eight states[3] either the employer or the commission may demand an examination, while in five states[4] the laws stipulate that the request must be made by the employer in writing or by order of the board. In Michigan the request may be made by employer, insurance company or insurance commissioner. In Arizona an examination also may be demanded by the employee by serving written notice upon the employer. The compensation act of New Mexico alone requires the workman to submit to a medical examination for the purpose of determining his physical condition at the time of his employment.

In cases where the examination is conducted by the employer's physician the laws generally provide that the employee at his own expense may have his physician present at the examination.

[1]Alabama, Arizona, Georgia, Illinois, Iowa, Kansas, Louisiana, Maine, Massachusetts, Minnesota, Nebraska, New Hampshire, New Jersey, Rhode Island, South Dakota, Tennessee, Wisconsin, Wyoming.

[2]Maryland, Nevada, New York, North Dakota, Ohio, Oklahoma, Oregon, Texas, Utah, Vermont, Washington.

[3]Connecticut, Delaware, Idaho, Indiana, Kentucky, Pennsylvania, Vermont, Virginia.

[4]California, Colorado, Montana, New Mexico, Wisconsin.

This is for the protection of the employee's interests. With this in view the laws of Illinois and South Dakota specify that the employer furnish to the employee at his request a copy of the report made by the examining physician should it happen that the employee had nc medical practitioner to represent him at the examination. Under the Kansas act, upon payment of a fee of $1, either employer or employee may obtain a report of any examination made by the physician or surgeon selected by the other party.

Protection is given the employee in Louisiana where no provision is made for the attendance of his own physician at the examination by the employer's physician. Here the employer, within six days, must furnish the employee a copy of the physician's report. Should the employer fail to provide an examination, the employee in turn must furnish a report of any examination made by his physician, for which the employer shall pay him $1. If there is no dispute six days after receipt of such reports, they automatically become prima facie evidence of the facts.

Where the commission has charge of the medical examination the report thereof usually is filed as part of the record and becomes available to both parties.

Many of the laws also specify that the examination may be designated at any reasonable time and place convenient to the employee. However, a restriction is expressed in the Kansas law where an examination may not be required oftener than once in four weeks. So in Illinois and South Dakota, although a second examination may be had one week after the first, thereafter four weeks must intervene. Arizona requires an interval of three months between examinations, but New Hampshire limits the period to a week.

A provision of the Delaware and North Dakota laws compels the employer to reimburse the employee for reasonable travel expense and loss of wages incurred in attendance at any examination after the first, while in Ohio this provision makes the employer liable for such expense in all examinations.

In general, the expense of examination is borne by the employer when performed at his request; and when ordered by the commission upon petition of one of the parties the cost is usually paid by the petitioner; but in Arizona the statutory fee of $10 is assumed by employer and employee equally.

In addition to the above requirements for medical examina-

tions, provision is made in the laws of sixteen states[1] for a medical examiner or a disinterested physician selected by the commission to make an examination of the injured party. This provision furnishes the commission with impartial and accurate information as to the condition of the injured workman, and by placing the matter in the hands of a neutral examiner, disputes are settled where either party may disagree as to the report of the other's physician. The fees in these cases are generally fixed by the commission and paid by the state. Ten dollars and travel expenses are paid in Idaho, Indiana, Georgia, Kentucky and Virginia, and $5 and expenses in Iowa, Michigan and Vermont. The fee is also $5 in Massachusetts, but is paid by the employer's association rather than by the state as in the other states mentioned. When the amount of the examiner's fee is stipulated in the law the commission has power to allow additional amounts in extraordinary cases. In Alabama, Kansas and Minnesota, the expense in disputed cases is charged to the party requesting the impartial examination and in Tennessee it is divided equally between the parties, but in Rhode Island, where this is the only statutory examination required, the examination fee is paid by the employer. The Idaho law allows the employer's or employee's physician to be present at his own expense at the examination by the impartial physician selected by the board.

In Louisiana, when there is a dispute as to the condition of the injured workman, upon application of either party the court shall appoint a medical practitioner to make an examination, the fee being $10, which is paid in advance by the applicant. The report of such examiner shall be prima facie evidence of the facts.

The Illinois and South Dakota statutes have a provision, which is foreign to all other workmen's compensation acts, making it the duty of surgeons treating an employee who is liable to die to call in another surgeon to make a special examination before the death of such injured person, the fee to be paid by the employee or his beneficiaries. This measure is intended to give corroborative evidence of the facts as to the nature and cause of death and to prevent possible collusion to defraud the beneficiaries.

[1]Alabama, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Maine, Massachusetts, Michigan, Minnesota, North Dakota, Rhode Island, Tennessee, Vermont, Wisconsin.

XII

REFUSAL OF EMPLOYEE TO ACCEPT MEDICAL TREATMENT

The workmen's compensation acts in twenty-two states[1] have specific provisions which bar or suspend compensation to an injured employee who refuses to submit to proper medical or surgical treatment. Doubtless in all other states the same rule is exercised by the commissions under the general authority granted them to administer the acts. Nine states[2] have practically the same clause in their law, viz.:

> "If any employee shall persist in insanitary or injurious practices which tend to either imperil or retard his recovery or shall refuse to submit to such medical or surgical treatment as is reasonably essential to promote his recovery, the commission may, in its discretion, reduce or suspend the compensation of any such injured employee."

The Idaho act omits the word "reduce" and the Wyoming law substitutes "forfeit" for the phrase "reduce or suspend."

The statutes of Pennsylvania, Delaware, Tennessee, California and Nebraska, although different in their wording, relieve the employer from liability where refusal of medical treatment by the employee results in increased incapacity or aggravates the injury. The laws of Kentucky and Wisconsin deny compensation when death is caused or when disability is aggravated or continued by failure or neglect of the injured worker to follow proper treatment.

The doctrine of denial or suspension of compensation is based on the theory that the continuance of disability is due to unreasonable conduct and not to the employment. In an Indiana[3] case, compensation was denied an injured employee who persistently refused medical treatment provided by the employer and who relied upon prayer in accordance with his religious belief, thereby, in the opinion of the Court, retarding recovery and prolonging the period of disability. Likewise in California[4]

[1]Alabama, California, Colorado, Connecticut, Delaware, Georgia, Idaho, Illinois, Indiana, Kentucky, Nebraska, Nevada, New Jersey, New Mexico, Oregon, Pennsylvania, Tennessee, Texas, Virginia, Washington, Wisconsin, Wyoming.

[2]Colorado, Idaho, Illinois, Nevada, New Mexico, Oregon, Texas, Washington, Wyoming.

[3]*Williams* v. *Diamond Coal Co.* 11 N. & C. C. A. Indiana Sup., p. 1219.

[4]*Shurtz* v. *Lilly Fletcher Company.* California. Industrial Accident Commission. Decisions. Vol. 8, p. 207.

an employee refused medical attention and obtained the services of a Christian Science practitioner; his condition became complicated and he suffered permanent partial disability. In deciding this case, the commission denied compensation for such portion of the permanent disability as was due to his "failure to accept the recognized remedies for his injury."

In a Wisconsin case[1] an employee was kicked on the shin by a horse. He applied home remedies and continued work for a week until his limb became numb. He was advised to go home and take care of himself. Two days later the company sent its own physician who found a badly infected leg. He removed the patient to a hospital, where he died within a week. In awarding compensation to his beneficiaries, the court dismissed the contention that the employee had been negligent and refused to adopt such means as a prudent person would ordinarily use under the circumstances, saying, "Laborers give little thought to trifling injuries which would arouse apprehension in others."

In a Kentucky case[2] the employer contended that the employee had "refused, failed or neglected to follow competent surgical treatment or medical aid or advice." Although the testimony showed that the employee had exhibited his crushed finger to many and possibly did not keep it as clean as it should have been kept, it was proved that he consulted a physician regularly. The Kentucky commission awarded compensation for the disability because there was no unreasonable refusal to follow competent surgical treatment. In another Kentucky case[3] the employee cut his finger but continued his work as usual. Infection set in and the physician was denied permission to lance the finger. The commission held such refusal was unreasonable and purely arbitrary, involving an utter disregard for professional advice. Compensation was awarded only for that portion of the disability which would have resulted had the employee submitted to the treatment prescribed, but no compensation was allowed for that part of the disability arising out of his unreasonable conduct.

The greater number of cases arise because of refusal of the employee to undergo operation, and the measure of reasonableness of such refusal is left to the judgment of the courts and

[1] *Banner Coffee Co.* v. *Industrial Commission.* 174 N. W. 544.
[2] *Murphy* v. *Turkey Foot Lumber Co.* Kentucky. Workmen's Compensation Board. Leading Decisions. 2d Report. p. 92.
[3] *Farmer* v. *Paducah Box & Basket Co.* Kentucky. Workmen's Compensation Board. Leading Decisions. 3d Report, p. 39.

commissions. The rule of reasonableness as prescribed in an English case[1] by Lord McLaren has been adopted with practical unanimity by the American courts:

> "that if the operation is not attended with danger to life or health, or extraordinary suffering, and if according to the best medical or surgical opinion the operation offers a reasonable prospect of restoration or relief from the incapacity from which the workman is suffering, then he must submit to the operation or release his employers from the obligation to maintain him."

This rule was applied to a Massachusetts case[2] where an eye blinded through injury affected the sight of the other eye. An employee refused to have the injured eye removed, thereby prolonging disability, and compensation was denied. This same principle was held in an Iowa case[3] where the injury consisted in severance of the tendon of a finger. Application for permanent disability on account of loss of use of the finger was denied because the claimant had refused a simple operation which involved no peril and which should have been accepted as reasonable.

A leading Michigan[4] case for hernia alleged to be due to accident holds that an operation for the same is not attended with danger and affords the only reasonable prospect for restoration of workmen's capacity to work. Refusal to undergo such an operation was unreasonable. The court said further,

> ". . . .we appreciate the timidity with which the average person contemplates an operation, minor as well as major. But we also appreciate that in thousands of cases, operations, many of them of but minor degree, have restored incapacitated men to the army of wage earners and put them in a position to discharge their duty to their dependents, themselves and society."

The opposite view is emphasized in a New Jersey case where the Supreme Court[5] of that state reversed an order of the lower court requiring a person to submit to an operation for hernia or suffer loss of compensation. In the course of the opinion the court said:

> "The concensus of opinion of the medical witnesses is that the operation is a major one. Although the peril to life

[1] *Donnelly* v. *Baird.* Scotch Session Case (1908) 536 Scot L. R. 394; 1 B. W. C. C. 95.
[2] *In re Nicotero.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 2, p. 531.
[3] *Owens* v. *Holland Inn.* Iowa. Workmen's Compensation Service. 3d Biennial Report, p. 56.
[4] *O'Brien* v. *Albrecht Co.* 172 N. W. 601.
[5] *McNally* v. *Hudson & Manhattan Railway.* 95 Atlantic 122.

seems to be very slight, 48 chances to 23,000, nevertheless the idea is appalling to one's conscience that a human being should be compelled to take a risk of death, however slight that may be, in order that pecuniary obligation created by the law in his favor against his employer may be minimized."

The Oklahoma Supreme Court[1] reversed the commission's order that the claimant should submit to an operation for hernia, holding, in opposition to the Michigan court, that

"ordinary hernia requires the administration of an anæsthetic and an incision of the abdominal wall and in some cases it proves fatal. The rule seems to be supported by the overwhelming weight of authority that no man shall be compelled to take a risk of life and death, however slight, in order that the pecuniary obligation created by law in his favor against his employer may be minimized."

The Oklahoma commission[2] also had in mind the English rule when it required a workman whose arm was improperly set to undergo an operation to rebreak and restore the arm. The commission found that "the operation would not endanger life or health nor cause extraordinary suffering," but would give good ground for restoration and relief.

The English rule was the guide in an Indiana case[3] where the employee refused amputation of his finger and as a result infection spread to the rest of his hand, the finger being amputated later. The claimant sought compensation for the loss of the index finger and the loss of use of the ring and middle fingers, left stiff owing to the infection. The court was of the opinion that claimant's refusal to allow an operation was not unreasonable because the physician had stated that the finger could be saved without it.

In Minnesota[4] the refusal of a man sixty years of age to undergo an operation for an ununited fracture of the thigh was held to be reasonable because the operation was dangerous and of doubtful result. The Utah commission[5] also found that refusal to submit to an operation was not unreasonable because the success of the operation was problematic.

However, the refusal to allow removal of a cataract to restore sight was held unreasonable, the Illinois Supreme Court[6] holding

[1] *Hanley* v. *Oklahoma Union Railway Co.* 197 Pacific 488.
[2] *Tuck* v. *Hivick Oil & Development Co.* Oklahoma Industrial Commission Reports. Vol. 2, p. 221.
[3] *Enterprise Fence & Foundry Co.* v. *Majors.* 121 N. E. 6.
[4] *State ex rel Albert Lea Packing Co.* v. *District Court of Freeborn County.* 178 N. W. 594.
[5] *Kobayashi* v. *Garfield Smelting Co.* Utah. Industrial Commission. Report of Decisions, 1918—1920, p. 149.
[6] *Joliet Motor Company* v. *Industrial Board.* 117 N. E. 423.

that the operation was such as a reasonable man would take advantage of if he had no one from whom to claim compensation. An employee, who had suffered an injury to her kidney was willing to be X-rayed but refused to take an injection of an opaque solution in order more sharply to outline the injured kidney. The decision of a lower court was reversed by the Nebraska Supreme Court[1] which held such refusal not unreasonable.

In Oregon[2] an employee sustained an accident resulting in a floating cartilage of the knee joint. The court found that, although an operation was not dangerous, a cure could not be guaranteed and a stiff knee might result, which would be worse than the present condition. The refusal to accept operation was, therefore, considered reasonable.

Refusal to undergo an operation was also held to be reasonable in a Pennsylvania case[3] where the operation did not offer a prospect of restoration of function. Employee suffered an injury to his eye so that the tear ducts were obliterated, and the board found:

> "that it would be unreasonable to compel this claimant, under a penalty of forfeiture of compensation, to submit himself to an experimental operation, practically new to both Europe and America, and in which the surgeons have not sufficient experience to enable them to formulate any definite opinion as to results."

In a Michigan case,[4] the injured employee was a foreigner who could not speak or understand the English language. He received a severe blow in the abdomen, producing symptoms from which the physicians diagnosed a rupture of the intestine and advised immediate operation. Upon removal to a hospital he was in great pain, and, being unaccustomed to his surroundings, did not consent to an operation until the next day. He subsequently died, and the Michigan Supreme Court held that his refusal to submit to an operation sooner was not so unreasonable and persistent as to defeat claim for compensation by his widow. Another decisive element in the case was that it was not estab-

[1] *U. S. Fidelity & Guaranty Co.* v. *Wickline.* 170 N. W. 193.

[2] *Grant* v. *State Industrial Commission.* 201 Pacific 438. Same facts and rulings in a Louisiana case; *Bronson* v. *Harris Ice Cream Co.* 90 Southern 759.

[3] *Eberle* v. *Worthington.* Pennsylvania. Workmen's Compensation Board. Decisions. Vol. 5, p. 202.

[4] *Jendrus* v. *Detroit Steel Products Co.* 144 N. W. 563

lished than an operation would have effected a cure. A similar decision[1] was given by the Kentucky board.

In another case an employee had been requested on numerous occasions to have an artificial hand fitted to replace the one lost in an accident and was notified that work was available when the hand was fitted. He declined to have the artificial hand, and his refusal was held unreasonable and his compensation for incapacity discontinued until he complied with the insurer's offer. In the words of the Massachusetts board which decided the case,[2]

> "The artificial hand would restore him to at least partial working efficiency, and he owed it to himself as well as to the insurance company to make every reasonable effort to prepare himself for further employment."

There is a similar Massachusetts decision[3] involving an artificial leg. The Wisconsin commission held[4] that refusal of an employee to submit to skin grafting was not sufficient reason for denying compensation, because the period of disability would have been decreased by such an operation.

Where the employee's leg became mangled and he refused an amputation, dying from his injury a week after the accident, claim was made by the employer that death was proximately a result of the employee's refusal to undergo an operation for amputation, and that therefore all claims for compensation should be forfeited. The Pennsylvania board[5] held that, although refusal to submit to an operation might bar compensation to the employee himself, it would not affect the rights of dependents to benefits and it was immaterial whether the operation was reasonable or unreasonable or whether or not it would have saved his life.

The Indiana Supreme Court[6] has held that where an employer makes compensation payment after an employee refuses to accept the medical services rendered by the employer, the statutory right to stop compensation payments is waived and the employer cannot later refuse to pay compensation because of the workman's non-acceptance of physician's services.

[1] *Bridgeman* v. *Consolidation Coal Co. Weekly Underwriter.* Vol. 106, No. 12, March 25, 1922, p. 650.

[2] *In re Frank Duda.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 4, p. 17.

[3] *In re Lipka.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 4, p. 22.

[4] *Pretzel* v. *Schlitz Brewery Co. Weekly Underwriter.* Vol. 106, No. 13, April 1, 1922, p. 700.

[5] *Completa* v. *Gillespie Co.* Pennsylvania. Workmen's Compensation Board. Decisions. Vol. 4, p. 158.

[6] *American Coal Mining Co.* v. *Decourcey.* 129 N. E. 635.

The Kansas Supreme Court[1] takes exception to the English rule in that it holds an operation should be undergone even though there may be danger to life or health. A part of their decision follows:

> "Plaintiff has been injured. The injury can be remedied and he can be restored to his former condition. It is his duty to do whatever is necessary to restore him. If he refuses to perform that duty he should not ask the state nor any person to assist him in that refusal.
>
> "Many if not most of the ordinary activities of men are painful in a sense; the man who works hard all day until his muscles cry for rest, etc.
>
> "Danger to life is everywhere at all times; it cannot be escaped by anyone. The most trifling accident to the person or the smallest scratch on the skin may result in death. The locomotive engineer and his fireman when they climb into the cab and start on their trip constantly face danger. The miner who goes into the earth to take therefrom ore or mineral faces death every day. These men are not deterred by danger although they know that injury or death is liable to come at any time. They go because that is their field of labor and it is their duty to go on."

It is interesting to note that in all the compensation laws there is no authority to compel, nor penalty to force, an injured employee to submit to medical treatment or operation except that compensation may be denied for such refusal. As stated by the Pennsylvania board[2]

> "such action will be taken and such control of compensation payments will be assumed by the Board as shall tend to persuade the employee to submit to an operation."

[1] *Strong* v. *Sonken Galamba Iron & Metal Co.* 198 Pacific 182.
[2] *Engbloom* v. *American Steel & Wire Co.* Pennsylvania. Workmen's Compensation Board. Decisions. Vol. 2, p. 434.

XIII

EMPLOYEE'S NEGLIGENCE IN TREATMENT OF INJURY

The workmen's compensation acts of the various states do not bar a claim for compensation when the accident is due to the employee's negligence; but when the disability from such accident is prolonged or aggravated by the employee's negligence or disobedience of physician's orders, a new element enters for which industry is not held responsible, and the increased disability resulting from such action has been held as not "arising out of the employment."

In a Wisconsin case[1] where the employee, after receiving first aid, was directed by the physician to go to a hospital for further treatment but refused and employed salve and home remedies which resulted in disability for one month, the commission ruled:

> "Where the workman suffers a disability which may be relieved by proper medical and surgical treatment, and he refuses to submit to such treatment, then in our opinion the employer should not be held responsible for compensation for the resulting period of disability. In this case the applicant assumed a great risk of serious infection and blood poisoning and the resulting period of disability might have been very much increased. We are of the opinion that he should have submitted to proper medical and surgical treatment and that if such treatment had been given he would have returned to work within two weeks, and that he is not entitled to compensation for any disability beyond two weeks from the date of the accident."

In another case, however, the Wisconsin Supreme Court[2] held that the employee's action in not consulting a physician was not unreasonable. He continued to work after being kicked by a horse and although at the time he attached little consequence to the injury, infection developed later.

Likewise, where the employee did not consider his injury serious and applied liniment at home until infection set in, the Connecticut commissioner, 5th District,[3] held he had not been negligent to the extent of willful and serious misconduct and

[1] *Voege* v. *Raulf*. Wisconsin. Industrial Commission. 3rd Annual Report, p. 40.
[2] *Banner Coffee Co.* v. *Industrial Commission*. 174 N. W. 544.
[3] *Kost* v. *Hendey Machine Co.* Connecticut. Compensation Decisions. Vol. 3, p. 546.

allowed full compensation. Another commissioner of the same state, 2nd District,[1] penalized the employee who neglected for five days to seek medical attention for an injury to a finger which later was amputated. Compensation was awarded for loss of the finger but nothing was allowed for partial loss of use of the hand because the employer had been prejudiced by lack of medical attention at the start. However, refusal to accept medical treatment may be carried to such an extent as to amount to serious and willful misconduct. This was the ruling in another Connecticut case[2] in which the Commissioner, 3rd District, dismissed a claim for compensation where an injury to a finger led to a serious infection due to lack of attention and delay in securing treatment.

The Oklahoma commission ruled[3] that "although a person disregards the instructions of his physician, if no evil consequences result therefrom, the fact of his disobedience is immaterial."

Where an employee had been stubborn and refused to obey the proper instructions of physicians, the Pennsylvania board[4] said:

> "Employees must accept in good faith the reasonable medical services furnished by the employer and obey all reasonable instructions of physicians and hospitals or they themselves suffer the serious results which their conduct alone has brought upon them."

In another Pennsylvania case[5] an employee with an injured eye which had been treated a week by the employer's physician was allowed to attend a funeral, but was directed to return for treatment in forty-eight hours. However, he did not return for treatment for six days. The eye was then in bad condition and he was taken to a hospital. While there his eye improved and the attending physician testified positively that had he remained it would have been possible to save the eye. He left, however, of his own accord and against the advice of the hospital physician. A few days later he returned and the eye was found in such condition that it was necessary to remove it. The employee con-

[1] *Keach* v. *Goodyear Cotton Mills, Inc. Weekly Underwriter.* Vol. 102, No. 3, January 17, 1920, p. 115.

[2] *Gallagher* v. *Winchester Repeating Arms Co.* Connecticut. Compensation Decisions Vol. 3, p. 119.

[3] *Cook* v. *Booth and Flynn.* Oklahoma. Industrial Commission Reports. Vol. 2, p. 259.

[4] *Filippi* v. *Pittsburgh Coal Co.* Pennsylvania. Workmen's Compensation Board. Decisions. Vol. 1, p. 301.

[5] *Higgins* v. *Lehigh Valley Coal Company.* Pennsylvania. Workmen's Compensation Board. Decisions. Vol. 1, p. 245.

tended he was entitled to compensation for loss of an eye. The award of the commission, which was sustained by the Court of Common Pleas, was for temporary disability only, during the time medical attention would have been required. "The fact that eye later had to be removed was, we think due entirely to the exposure incurred by claimant himself when he took the matter in his own hands."

In a Wisconsin case[1] the facts were very much the same and the commission decided that 60% of the loss of vision was due to the injury and the remaining 40% of vision was lost because of employee's negligence and disobedience of instructions given by the physicians. The commission therefore granted compensation for 60% of the loss of the eye.

A similar ruling[2] was made by the California commission where an employee wrenched his knee and, contrary to physician's orders, made a trip using crutches. Because the injury was aggravated by neglect to follow the physician's orders the compensation for disability was reduced to a reasonable period under which the injury would have healed.

[1]*Majeska* v. *Badger Auto and Transfer Co.* Wisconsin. Industrial Commission. 9th Annual Report, p. 26.
[2]*Porter* v. *Noble.* California. Industrial Accident Commission. Decisions. Vol 1, p. 588.

XIV

NEGLIGENCE OR MALPRACTICE OF PHYSICIAN

Four states[1] make statutory provision covering aggravation of injury due to improper medical treatment, but we find no instance in the law or decisions where the employer is held liable for damages. The extent of the employer's liability, as expressed in the laws of Virginia[2] and Georgia,[3] is that

> "employer shall not be liable in damages for malpractice by a physician or surgeon furnished by him..... but the consequence of any such malpractice shall be deemed part of the injury resulting from the accident and shall be compensated for as such."

The Supreme Court of Oklahoma[4] held this same principle of law in a case where a fractured limb was improperly set, resulting in a shortening of four inches. The employee thereupon consulted another physician who rebroke the leg in an attempt to overcome this shortening. No union taking place from this second operation, the leg was amputated. The employer set up the claim that his liability ceased when he supplied the services of a regularly licensed and practicing physician, and that any untoward results experienced thereafter were not a just charge against him. The court, however, held that the employer was liable, and awarded compensation for loss of a leg because

> "under Workmen's Compensation Act an employer is liable for all legitimate consequences following an accident, including unskillfulness or error of judgment of a physician furnished the employee. To deny recovery for the ultimate result of the accident where the disability has been increased by the intervening negligence or carelessness of employer's selected physician would be to defeat one of the purposes of the Act."

In Washington, an employee who had accepted a final award covering his injuries later brought civil suit against his employer alleging malpractice of the physician. The Washington Supreme Court[5] held that the malpractice of the physician was a result of the original injury and to be considered an aggravation thereof,

[1]Georgia, Kentucky, Virginia, Wisconsin.
[2]Acts of 1918. Chap. 400. Sec. 27.
[3]Act of 1920. Chap. 814. Sec. 27.
[4]*Booth and Flinn* v. *Cook*. 193 Pacific 36.
[5]*Ross* v. *Erickson Construction*. 155 Pacific 153.

and because the employee had been compensated for all injuries resulting from the primary injury, or proximately attributable thereto, no suit could be maintained for malpractice in treatment.

An entirely different principle holds in the Wisconsin law,[1] which reads as follows:

> "Nothing...shall prevent an employee from taking the compensation he may be entitled to under said sections and also maintaining a civil action against any physician or surgeon for malpractice. The measure of damages, if any be recovered in such action, shall be the amount of damages found by the jury less the compensation paid to the employee under said sections, due to such malpractice."

The Wisconsin rule is followed in a Minnesota court case[2] in which it was held that the duty of the employer was discharged when he had selected a competent physician but that the physician owed the employee the duty to exercise ordinary care and skill. The employee having the same rights as any patient to sue for malpractice, the $2,000 verdict on account of improper setting of the fracture was not considered excessive in this case.

A Kansas decision[3] holds that the remedy in case of malpractice is not covered by the workmen's compensation act but lies in civil action for damages. The decision in this case says, in part:

> "A part of the loss occasioned by an accidental injury to a workman is cast on the employer, not as a reparation for wrong doing but on the theory that it should be treated as part of the ordinary expense of operation. So much of an employee's incapacity as is the result of unskilled medical treatment does not arise out of and in the course of his employment within the meaning of that phrase so used in the statute. For that part of his injury his remedy is against the persons answerable therefor under the general laws of negligence, whether or not his employer be of the number."

The Maine commission[4] decided that where the employee selected a physician who was negligent in setting a fracture, the employer was released from responsibility not only for malpractice but also for the prolonged disability resulting therefrom.

In Kentucky, an employee selected and paid for his own physician who was negligent in the treatment of the injury, caus-

[1] Workmen's Compensation Act (with 1921 Amendments) Sec. 2394-25, Par. 3.
[2] *Viita* v. *Dolan*. 155 N. W. 1077.
[3] *Ruth* v. *Witherspoon Englar Co.* 157 Pacific 403.
[4] *Seavey* v. *Hodgdon Brothers*. *Weekly Underwriter*. Vol. 98, No. 20, May 18, 1918, p. 688.

ing gangrene to develop. It was contended by the employer that he was not liable for the results of the improper treatment, but the board[1] held that, inasmuch as the physician selected by the employee was duly licensed by state authority, improper treatment administered by such a physician did not deprive the employee of the right to compensation unless he was aware that the treatment was improper.

[1]*Wells* v. *Blue Grass Coal Corporation.* Kentucky. Workmen's Compensation Board. Leading Decisions. 3rd Report, p. 5.

XV

TESTIMONY OF PHYSICIANS—PRIVILEGED COMMUNICATION

The universally accepted principle of privileged communication between physician and patient was abrogated or greatly modified in the enactment of workmen's compensation laws in many of the states. This question is covered in either of two ways: (a) the law provides that any physician who examines or treats an injured worker may be required to testify as to the results thereof; (b) the laws of some states also contain the provision that in conducting hearings the commission shall not be bound by the common law or statutory rules of evidence, but may make its investigations in a manner best suited to bring out the facts and establish the rights of the parties to the controversy. Thus it is seen that under either of these provisions physicians may be compelled to testify as to their findings upon examination or treatment of the injured worker.

The compensation boards in the various states are quasi-judicial bodies, and while they are restricted in certain ways by the law under which they operate, they are permitted wide latitude in the methods by which they arrive at their decisions.

The commissions in two states[1] are "not bound by the technical rules of evidence," while the acts of eight states[2] stipulate that "procedure and process shall be summary and simple as reasonably may be."

However, the Minnesota act[3] is still more definite in specifying that

> "Any physician designated by the commission, commissioner or referee, or whose services are paid for by the employer, who treats or who makes or is present at any examination of an injured employee may be required to testify as to any knowledge acquired by him in the course of such treatment or examination relative to the injury or disability arising therefrom."

Alabama and Tennessee have similar provisions, while the acts of six states[4] expressly stipulate that no fact communicated

[1]Montana, Pennsylvania.
[2]Georgia, Idaho, Illinois, Indiana, Kentucky, Massachusetts, New Mexico, Texas.
[3]Laws 1921. Chap. 82. Sec. 23. Par. 5.
[4]Delaware, Georgia, Nevada, Virginia, Washington, Wyoming.

to any physician attending or examining the employee shall be privileged. A statement in the Nebraska act is to the effect that "no person shall be excused from testifying upon the ground that testimony may tend to incriminate him or subject him to penalty or forfeiture."

On the other hand, in Colorado any physician attending an employee in a professional capacity may be required to testify, but will not be required to disclose confidential communications imparted for the purpose of treatment and which are unnecessary to a proper understanding of the case. Likewise, in Wisconsin, where by general statute physicians are not allowed to disclose information acquired while attending patients in their professional capacity, the physicians are required to testify and furnish information upon which to base compensation, but may withhold confidential communications "given for the purpose of treatment and unnecessary to a proper understanding of the case."

The Kansas act stipulates that when employer or employee requests the presence of his physician at a medical examination and no reasonable opportunity is given the other party to have his physician participate in the examination, the physician making the examination will be prohibited from testifying as to the condition of the employee in a dispute as to the injury.

In Massachusetts the report of an impartial physician, appointed by the Industrial Accident Board, making a physical examination is admissible as evidence providing the employee and insurer have reasonably been furnished with copies thereof.

The Pennsylvania act admits hospital records as evidences of the medical and surgical matters contained therein, but not as conclusive proof of such matters. Also the report of the physician, surgeon or expert appointed by the board or referee shall be filed and become a part of the record.

XVI

MALINGERING

As noted before, most of the compensation acts provide in detail for medical examinations of injured employees, which may be repeated at reasonable periods of time. These serve not only to determine the present status of the workman's injury, but also tend to expose any imaginary or pretended ailment.

The most difficult problem seems to be the treatment of the convalescent who tries to prolong his period of disability. To counteract such tendencies the practice of many industrial boards is to require the workman to accept light work pending complete recovery. In seven states[1] the compensation acts require that the employee accept employment procured for him suitable to his capacity, and should he refuse, all compensation payments are stopped, unless such refusal, in the opinion of the commission, be justified.

In Massachusetts[2] an employee who fell from the first floor to the basement through an elevator well and received treatment for his injuries, continued to receive compensation for almost three months, after which it was stopped, on claim from the insurer that incapacity for work had ended. The employee claimed, however, that he was still unable to work on account of a pain in his back when he undertook to lift or stoop. It was the opinion of the physician that the claimant was simulating because there was no evidence of any disordered nervous condition. In demonstrations at lifting and stooping performed by the claimant at the hearing, he appeared to hold back his muscles and efforts. Upon this showing, the board ruled that his disability had terminated.

A similar ruling[3] was made by the Wisconsin commission where an employee claimed that his arm had been pinched between two slabs of marble and, after two weeks' disability, still alleged that upon movement of his arm he suffered pain. Quoting from the commission's decision:

[1]Alabama, Delaware, Georgia, Indiana, Kentucky, Texas, Virginia.

[2]*Lenoci* v. *Oscawana Building Co.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 3, p. 281.

[3]*Daggett* v. *Northwestern Marble & Tile Co.* Wisconsin. Industrial Commission. 3rd Annual Report, p. 66.

> "The compensation act compensates for actual inability to work and resulting loss of wage. It does not provide compensation for imagined inability to work. The respondent offered to take the applicant back to work at the end of two weeks and give him employment at the wage he was earning at the time of the accident. His right arm was uninjured, and notwithstanding the alleged pain in the left arm, at the expiration of two weeks he should have been able to earn as much as he was earning at the time of the accident. In view of the fact that there was no visible sign of injury, we are obliged to follow the advice of the doctor that disability ceased at the end of two weeks."

In a Pennsylvania case,[1] where the employee had partially recovered from an injury caused by burns on his hands, the question arose whether he should accept suitable work offered him by his employer. The commission ruled that the employee in refusing the work, had not done his duty, and thereby had prevented the establishment of a basis upon which to compute compensation for partial disability. Compensation was withheld for the period of such disability until

> "the claimant relents from his present determination to stubbornly refuse offers of employment and while asserting his total disability as against the positive and certain testimony presented by physicians as well as his own physical condition as seen by the Board."

In a Wisconsin case,[2] an employee suffered the amputation of several fingers and claimed inability to work because of the tenderness at point of amputation. The commissioners agreed that the claimant would suffer from such tenderness upon returning to work, but, in denying further compensation, held:

> "It is necessary for him to toughen his fingers by actual service. This must be done by all who suffer an injury of this kind. He can never fit himself for work by remaining in idleness. Claimant must act a man's part and earn his support."

The Massachusetts board[3] stopped compensation payments for alleged injury to the shoulder of a laborer who gave no evidence of physical injury and who also refused to accept light work offered by the employer.

The New York board awarded additional compensation to a young man based upon the minor's expectation of wage increase. The case[4] was appealed to the Supreme Court which reversed the

[1] *Lapinski* v. *Lehigh Valley Coal Co.* Pennsylvania. Workmen's Compensation Board. Decisions. Vol. 4, p. 73.

[2] *Lewandowski* v. *Illinois Steel Co.* Wisconsin. Industrial Commission. 2d Annual Report, p. 32.

[3] *Lomaglio* v. *Shapiro & Pritzker.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 4, p. 376.

[4] *Markowitz* v. *Watters Laboratories.* 119 App. Div. 267.

award. A review of the evidence disclosed that the claimant was unwilling to accept suitable work or learn a useful trade that would enable him to earn a living because he was of the belief that such action would stop compensation payments.

When a claimant is placed upon the witness stand, the commission is frequently able to judge from his conduct and testimony whether any attempt is being made at malingering. This is exemplified by a Delaware case,[1] in which the Industrial Accident Board was not favorably impressed with the claimant as a witness and denied further compensation. This was held to be a plain case of malingering in that, although able to do so, he made no honest effort to work, even at a different occupation than that in which he was engaged at the time of injury. Under the Delaware law[2] he was required to seek work, even though in some other occupation.

According to medical testimony in an Illinois case,[3] a man evidently in excellent physical condition would not have trouble with his muscles and nerves, causing shortening of the limb, unless after a lapse of time the objective symptoms would appear in some form such as atrophy, etc. In this case there was no evidence of injury, no shortening of the limb as claimed, and the compensation was terminated by the commission. However, in Kentucky where an employee dislocated his shoulder and after a lapse of time still complained of his injury with limited motion of the arm, etc., compensation was continued, although physicians were unable to find any physical cause of the trouble and the employee was otherwise in good health. The commission held[4] that the employee was not malingering but that his condition was "psychic" and that he had apparently lost "the power to will the movement of the arm."

That an employee may be wrongfully accused of malingering by a misunderstanding of facts was shown in a Connecticut case.[5] Here the workman suffered an injury to his foot, and sought medical attention from his lodge physician. The physician reported that the employee was able to return to work on

[1] *McAllister* v. *Catlin & Co.* Delaware. Digest of Workmen's Compensation Cases. 1918-1919, p. 36.

[2] Revised Code of Delaware, Art. 5, Chap. 90, Sec. 133.

[3] *Blahouse* v. *Heath & Johnson Co.* Illinois. Industrial Board. Bulletin, Vol. 1, p. 150.

[4] *Alsip* v. *Beaver Dam Coal Co.* *Weekly Underwriter.* Vol. 106, No. 3, January 21, 1922, p. 147.

[5] *Candee* v. *Scovill Mfg. Co.* *Weekly Underwriter.* Vol. 107, No. 26, December 23, 1922, p. 1295.

a certain day, whereas the employee actually resumed his work twelve days later. The employer contended that the intevening time was a period of malingering. When the case was brought for hearing it developed that the physician, when making his statement, did not know that the employee's work required him to be on his feet continually, and it was also shown that the employee after return to work was able to work only part of the time because of pain in his foot. The commissioner held that the employee was not guilty of malingering and ordered compensation paid for disability up to the day he returned to work.

XVII

PERMANENT TOTAL DISABILITY

From the standpoint of compensation law, the severity of a disability is in direct proportion to the loss of earning capacity. It is upon this theory that all compensation schedules and awards are based. When the disability reaches the extreme where the workman has lost his entire earning capacity, it is described in the various compensation acts as total and permanent.

Among the forty-two states having compensation laws, all except four[1] define the specific conditions under which permanent total disability is to be conclusively presumed. These conditions refer to blindness, dismemberment, paralysis or loss of mental faculties. Under these conditions it is legally presumed that the workman has lost his capacity to work at a gainful occupation. In other cases where permanent total disability is in question, the burden of proof is on the workman to establish his incapacity and the commission must determine the case according to the facts.

The loss of both eyes, or total blindness is included as a permanent total disability in all the thirty-eight laws which enumerate such disabilities.

All of these thirty-eight states agree that the loss of both arms constitutes permanent total disability. However, in four states[2] the loss of arms must be at or near the shoulder. In three states[3] the loss must be at or above the elbow, while in six states[4] the loss of both hands must be at or above the wrist. Twenty-five states[5] compensate for the loss of both hands as a permanent total disability.

As to the loss of the lower extremities, only four states[6] out of the thirty-eight do not state in their laws whether the loss of both legs shall constitute permanent total disability. How-

[1]Arizona, Massachusetts, New Hampshire, North Dakota.
[2]Alabama, Minnesota, Tennessee, Wisconsin.
[3]Nevada, Washington, Wyoming.
[4]Connecticut, Kentucky, Maine, Rhode Island, Texas, Vermont.
[5]California, Colorado, Delaware, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Maryland, Michigan, Montana, Nebraska, New Jersey, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Utah, Virginia, West Virginia.
[6]Alabama, California, Tennessee, West Virginia.

ever, two states[1] require the loss of both legs close to the hips; one state[2] specifies loss of both legs at or above the knees; six states[3] stipulate the loss of both feet at or above the ankles; and the remaining twenty-three states[4] include the loss of both feet as a permanent total disability.

The above covers the treatment of eyes, arms and legs in pairs, but in many statutes the combined loss of an eye and a limb or an arm and a leg is also designated as a permanent total disability. Thus in sixteen states[5] the compensation acts provide that the loss of "both hands, or both arms, or both feet or both legs, or both eyes, or any two thereof shall constitute total and permanent disability." In another group of fourteen states the eyes are not included in the combination and only the loss, in whole or part, of an arm and a leg is mentioned. Thus in one state[6] the combination must be the loss of one arm at the shoulder and one leg at the hip; in two states[7] the laws call simply for the loss of an arm and a leg; in another state[8] the loss of arm must be at or above the elbow and of the leg at or above the knee. Nine states[9] require only the loss of a hand and a foot, while another state[10] specifies the loss of a hand at or above the wrist and a foot at or above the ankle.

Among the thirty-eight states that enumerate conditions under which permanent total disability is conclusively presumed, eight[11] do not include a combination of the loss of eye and limb or arm and leg under such designation. This of course does not preclude the compensation in these states from being properly awarded when the injured workman can establish that he is totally and permanently disabled from continuing in a gainful occupation.

Paralysis as a result of injury to the spine is included in the laws of seventeen states as a permanent total disability. Five

[1]Minnesota, Wisconsin.
[2]Nevada.
[3]Connecticut, Kentucky, Maine, Rhode Island, Texas, Vermont,
[4]Colorado, Delaware, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Maryland, Michigan, Montana, Nebraska, New Jersey, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Utah, Virginia.
[5]Colorado, Illinois, Indiana, Iowa, Maryland, Michigan, Montana, Nebraska, New Jersey, New Mexico, New York, Ohio, Oklahoma, South Dakota, Utah, Virginia.
[6]Wisconsin.
[7]Washington, Wyoming.
[8]Nevada.
[9]Georgia, Idaho, Kentucky, Louisiana, Maine, Oregon, Rhode Island, Texas, Vermont.
[10]Connecticut.
[11]Alabama, California, Delaware, Kansas, Minnesota, Pennsylvania, Tennessee, West Virginia.

of these states[1] require total or complete paralysis; eight states[2] require paralysis of both arms or both legs or of one arm and one leg; one state[3] requires the paralysis of both arms or both legs; and in three states[4] the paralysis must be such as permanently to incapacitate the workman for performing work at any gainful occupation.

Permanent loss of mental faculties is enumerated as a permanent total disability in four states[5] and an injury to the skull or brain resulting in incurable imbecility or insanity is classified similarly in eleven states.[6]

Thus although the Minnesota law does not define the words "permanent total disability," it specifies certain injuries which are compensable as such. The Supreme Court of that state in a decision says:[7]

> "There are, however, many other injuries which may result in permanently and totally disabling a man. Those set forth in the statute are not intended to be exclusive. Cases must be passed upon as they arise, and no hard and fast rule can be formulated so as to include them all. What is permanent total disability is largely a question of fact and must depend upon the circumstances of each particular case. The statute itself is highly remedial in its nature. It should be liberally construed, and liberally applied to accomplish the beneficial purposes intended and the courts should guard against a narrow construction."

Multiple injuries in one accident may unite to produce total and permanent disability. Thus in Kentucky[8] an employee, who as the result of a fall suffered a fractured left leg, the amputation of the right leg near the knee, injury to groin, fracture of two ribs and both collar bones and laceration of breast and arm, received an award for permanent total disability because:

> "The loss of his right leg together with the permanent injury to his left leg, from an occupational standpoint, intensifies both injuries, and necessarily brings the injured employee almost within the class of cases in which the disability should be deemed total."

This, together with other injuries sustained, was sufficient to

[1]Alabama, California, Minnesota, South Dakota, Tennessee.
[2]Connecticut, Delaware, Idaho, Kentucky, Maine, Nevada, Texas, Vermont.
[3]Rhode Island.
[4]Oregon, Washington, Wyoming.
[5]Alabama, Minnesota, South Dakota, Tennessee.
[6]California, Connecticut, Delaware, Idaho, Kansas, Kentucky, Maine, Nevada, Rhode Island, Texas, Vermont.
[7]*State ex rel Casualty Co. of America* v. *District Court of Blue Earth County.* 158 N. W. 700.
[8]*Sparks* v. *Offutt Lumber Co.* Kentucky Workmen's Compensation Board. Leading Decisions. 3rd Report, p. 143.

support the award. Another point of interest in this case was the requirement that claimant must prove permanent total disability except in the cases specifically mentioned in the statute in which such disability is conclusively presumed.

In Oklahoma[1] evidence for an award of permanent total disability disclosed that as a result of accident the claimant had a foot amputated, an arm fractured so as partially to impair its function, an ankylosed and weak back, difficulty in breathing due to crushing of his chest, aggravation of a pre-existing bladder trouble and general shock to his nervous system. It was shown that he might perform light tasks in pleasant weather, but he would be unable to obtain and hold remunerative employment.

The sole question in determining the basis of an award for permanent total disability seems to rest on the injured workman's ability to resume employment. In Pennsylvania the test is measured by ability to resume the former employment or an occupation of similar nature, the rule being set forth in a case[2] where an injury resulted in the amputation of the right arm between the elbow and wrist, loss of the second and third fingers and stiffening of the little finger of the left hand. In affirming compensation for permanent total disability the court said:

> "The occupation of the claimant was one that required substantially the normal use of his hands and the same use would be required in any other work for which he would be fitted."

In another Pennsylvania case[3] a similar ruling was made where a tin plate cutter lost the major portion of the fingers of both hands. The finding of the commission, sustained by the court, was as follows:

> "The condition of claimant's hands, as the result of such accident constitutes a permanent loss of the use of such members, that, in his present condition, he is unable to perform the work he was engaged in at the time of accident, nor can he perform the duties of a street car conductor, motorman or railroad baggageman, with which he has had experience."

The same rule was applied in a Massachusetts case[4] in which a laundress sustained a serious injury, by reason of which she

[1] *Beavers* v. *Selden Breck Construction Co.* Oklahoma Industrial Commission Reports. Vol. 2, p. 53.
[2] *Wassick* v. *McKeesport Tin Plate Co.* 1 Mackey 91.
[3] *Cartin* v. *Standard Tin Plate Co.* 1 Mackey 285.
[4] *Kiernan* v. *Aspinwall Hotel Co. Weekly Underwriter.* Vol. 103, No. 23, December 4, 1920, p. 915.

was unable to resume her work as a laundress or her earlier employment as a weaver. The employer petitioned to have the compensation award of total disability reduced on the ground that she had some earning power. The commission replied that, although the employee undoubtedly had earning power in potentiality, she had none in actuality unless a specially selected position involving light work were found for her, and therefore the employee was still totally incapacitated and compensation must continue.

An injury ordinarily producing a partial disability may cause a total and permanent disability to an aged workman owing to his inability to recover and resume employment. Thus where an employee sixty years of age fractured a hip and one year after accident was still unable to go about without crutches, the Supreme Court of Louisiana[1] said:

> "Elderly men are nowadays more or less out of the running when it comes to securing employment, and if by this infirmity plaintiff has been converted from an able bodied carpenter securing work regularly in his trade into an infirm man unable to secure remunerative employment of any kind his incapacity must be held, we think, to be total under the statute. He is illiterate and capable only of manual labor. The statute is one intended to be essentially practical in its operation."

Similar facts appear in an Oklahoma case[2] in which an award was made for permanent total disability.

In Delaware[3] an employee fifty-nine years of age received an injury resulting in amputation of left leg between ankle and knee. Because of age and lack of mental ability he was unable to do anything except physical labor and, as his injury precluded his earning anything in the future, compensation was awarded for permanent total disability.

The question arose whether an employee seventy-nine years of age who fractured his hip and was unable to resume his work or even to some extent to care for his personal daily wants, should be compensated for loss of leg or for total disability. The Pennsylvania commission[4] in this case held that the law is to be liberally construed and awards for disability are to be based upon actual financial loss. He was therefore awarded total disability compensation.

[1] *Meyers* v. *Louisiana Railway and Navigation Co.* 140 La. 938.
[2] *Wilson* v. *Wilson Lumber Co.* 188 Pacific 666.
[3] *Pullman Car Lines* v. *Riley.* 114 Atlantic 920.
[4] *Clark* v. *Clearfield Opera House Co. Weekly Underwriter.* Vol. 106, No. 9, March 4, 1922, p. 468.

A ruling contrary to that above was made in an early New Jersey case. The Court of Common Pleas made an award of 400 weeks for permanent total disability to a plumber, aged seventy-three, whose leg was crushed by a falling radiator and he was thereafter unable to follow his occupation. In reducing the award to 175 weeks, the statutory allowance for loss of a leg, the Supreme Court[1] held that the award must be limited by the schedule contained in the act and that the age or health of the employee, although causing an accident to have a different effect, does not affect the amount of compensation.

The question of subsequent earnings of a workman who had been awarded compensation for permanent total disability arose in a Kansas case.[2] The employer contended that incapacity had ceased since the injured employee was conducting a cleaning, pressing and tailoring business in the basement of his home, from which he was making $12 to $15 per week. The court held that profits of the business did not constitute earnings under the law and that he was entitled to full compensation. The following is quoted from the opinion:

> "The phrase quoted (total incapacity for work) does not imply an absolute disability to perform any kind of labor. It required a practical and reasonable interpretation, as is illustrated by the familiar rule that inability to obtain work, caused by an injury, is classed as total incapacity. One who is disqualified from performing the usual tasks of a workman in such a way as to enable him to procure and retain employment is ordinarily regarded as totally incapacitated. The Scotch Court of Session has held that the profits of a business owned by the injured workman are not to be classed as earnings.
>
> "We find no American cases in which the question has been referred to. If it had been shown in this instance that the plaintiff personally performed a part of the work of cleaning, pressing, and tailoring, a very different question would be presented. Possibly any portion of his income that could be traceable to such work on his part should be given the same effect as though he received it as wages. But the showing made is merely that he is "making" a certain sum weekly out of the business which he is "conducting" as owner, and this might be the case, although he were a complete physical wreck. A judgment based on a finding that workman's injury has resulted in his total disability to work cannot be said to be inequitable or against conscience because he has the thrift and intelligence to provide for his support by investing such means as he has in a business carried on by the labor of others under his direction."

[1] *Bateman Manufacturing Co.* v. *Smith.* 89 Atlantic 979.
[2] *Moore* v. *Peet Bros. Mfg. Co.* 162 Pacific 295.

In a Wisconsin case[1] the same conclusion was reached. A workman who had lost the use of his legs became totally and permanently disabled from performing labor at his trade as a carpenter, and the employer was held to be not entitled to a diminution of the award because claimant used the lump sum payment to start a small business, conducted by himself and wife. We quote from the decision:

> "There is a substantial difference between a man's wage-earning capacity, the foundation of the workmen's compensation act, and his ability to make money in a business conducted under his supervision and direction."

Where through accident an employee loses the use of his right hand and right foot and is unable to continue his former employment, he is totally and permanently disabled, according to the Kansas Supreme Court,[2] and an award of $18 per week for 500 weeks was affirmed, although the employee was engaged in another capacity at a greater wage than he was receiving at the time of his injury.

Somewhat similar is the decision of the Michigan court. In this case[3] the foreman of a pile-driving crew met with an accident, fracturing his jaw, paralyzing his face, rendering him subject to dizzy spells and permanently weakening him physically. After the accident the claimant was unable to resume the same line of work, but secured employment as foreman of a carpenter crew at an increase over his former wage. For this reason the employer contended that disability had ceased. The court, however, ruled that, under the Michigan law, loss of wages shall represent the impairment of earning capacity in the employment in which he was working at the time of accident and that the injuries received by the claimant had physically incapacitated him from pursuing that employment. Compensation for permanent total disability was continued.

Based on the ruling in this case, a common laborer shoveling sand, carrying and moving things about, lost his hand in an accident and claimed compensation for permanent total disability because he was incapacitated for work at shoveling sand, which required the use of two hands. The Michigan Supreme Court,[4] however, made a distinction between a skilled workman as in *Jamieson* vs. *Newhall*, *supra*, and a common laborer as in

[1] *McDonald* v. *Industrial Commission of Wisconsin.* 162 N. W. 345.
[2] *Superior Smokeless Coal Mining Co.* v. *Bisshop.* 205 Pacific 497.
[3] *Jamieson* v. *Newhall.* 166 N. W. 834.
[4] *Miller* v. *Fair and Sons.* 166 N. W. 634.

this case, holding that the latter was only partially disabled because he could do other work with one hand.

An award for permanent total disability was made in Wisconsin[1] where the fractured bones of a leg refused to unite and an operation to remedy the condition was dangerous because of the employee's weak heart; he was therefore considered as totally disabled and compensation was awarded accordingly.

In the opinion of the Illinois Supreme Court[2] "there can be no plain and distinct rule" to distinguish cases which render one totally and permanently incapacitated from work.

> "A man may have so devoted himself to manual labor without attempting to cultivate his mental faculties that the loss of his right arm might seem to him to have completely disabled him to do any work for which he might feel he was fitted or could fit himself and yet experience of different men has shown that is not always true. In our opinion the only reasonable rule to follow in construing this statute is to make it a matter for the sound judgment and discretion of the arbitrator and Industrial Commission, provided that in enforcing the statute they substantially comply with its provisions."

[1] *Clark* v. *Torrey Cedar Co.* Wisconsin. Industrial Commission. 6th Annual Report, p. 27.

[2] *Joliet & Eastern Traction Co.* v. *Industrial Commission.* 132 N. E. 794.

XVIII

PERMANENT PARTIAL DISABILITY

The system of compensation adopted by most state laws provides specific awards for certain permanent partial disabilities such as loss of finger, foot, hand, arm, eye, etc. For such disabilities as do not appear in the schedule a comparison must be made with those in the schedule and the award must be proportioned to the amounts stated in the schedule.

A permanent partial disability signifies an injury which impairs the workman only to a limited extent, but from which he may not hope for recovery. The loss of a finger, for example, is a permanent disability in that the finger cannot be replaced and it is a partial disability in the sense that the employee is not totally incapacitated for work.

A large number of permanent partial injuries are considered as "dismemberment and loss of use." In such cases the amount of compensation itself is fixed by the schedule, but in many others the amount of compensation must be estimated.

Thus in a New Jersey case,[1] an employee while attending a furnace was severely burned on both hands and one eye. The trial judge found there was a 50% loss of use of each hand and a 10% loss of use of one eye and awarded to each that percentage of the number of weeks of compensation allowed by the statute for permanent disability. The Supreme Court, in disagreeing with this award, held:

> "This is not strictly a mathematical problem. It is not solved by adding up fractional parts but upon a basis of percentage of total and permanent disability reasonably found to be produced by the several injuries considered collectively and with due regard to their cumulative effect. We think the true rule is that in the case of a partial but permanent loss of usefulness of both hands, or both arms, or both feet, or both legs, or both eyes, or any two thereof, compensation shall bear such relation to compensation for total and permanent disability as the partial but permanent disabilities collectively bear to total but permanent disability."

Likewise in a New York case[2] where the workman lost the second finger of his right hand and in the same accident suffered

[1] *Orlando* v. *Ferguson.* 102 Atlantic 155.
[2] *Marhoffer* v. *Marhoffer.* 116 N. E. 379.

lacerations of thumb and index finger of the same hand, the board awarded eight weeks' compensation for temporary disability due to laceration and thereafter thirty weeks' compensation for loss of finger. The Supreme Court held this award was not in accordance with the law and set aside the award for the eight weeks, saying:

> "Concurrent awards and consecutive awards, based on separate items of physical impairment, disconnected from earning power, alike ignore the fundamental principle that the basis of compensation is a sum payable weekly for a fixed time during which the employee is actually or presumptively totally or partially disabled and non-productive."

A contrary view was expressed by the Indiana court[1] on the question of consecutive or concurrent awards. The employee suffered an accident which resulted in amputation of his left arm above the elbow and a fracture of the sacrum. The commission certified to the Supreme Court the question whether the claimant was entitled to compensation for permanent partial disability due to loss of arm and in addition for disability due to fracture. The court answered in the affirmative, holding that the statutory phrase "in lieu of all other compensation" referred only to compensation for permanent partial disabilities, so that additional compensation might be claimed for disabilities due to other injuries, even though sustained at the same time, the awards to run consecutively and not concurrently. It is interesting to note the suggestion of the court to the effect that

> "Possibly a Workmen's Compensation Act might appear more logical and scientific, possibly more in harmony with a sound economic policy if compensation in all cases were measured by actual disability and loss of earning capacity, regardless of nature and number of distinct injuries from which it resulted."

However, in Delaware[2] when, in a similar accident, an employee lost his arm and suffered temporary disability to his foot, an award was made for loss of the arm alone because the claimant was not entitled to compensation for disability to the foot when such disability would not extend beyond the period during which maximum compensation is paid for loss of an arm.

Somewhat different from the Delaware decision just quoted is a Pennsylvania decision[3] in which the loss of the right foot and injury to the left were compensated separately and con-

[1] *In re Denton.* 117 N. E. 520.
[2] *Hnatyozyn* v. *Pennsylvania R. R.* Delaware. Digest of Workmen's Compensation Cases. 1918-19, p. 26.
[3] *Hollis* v. *Poland Coal and Coke Co.* 1 Mackey 138.

secutively. Compensation for the right foot was fixed and known, but that for the left foot was indefinite pending final recovery. The court ruled that compensation should be paid for the left foot until recovery, after which the specific compensation for the loss of the right foot should begin. There was a similar ruling in Connecticut.[1]

The Iowa Workmen's Compensation Service[2] held the opinion that compensation for several injuries in one accident should be awarded neither consecutively nor concurrently under the statutory schedule, but an award should be based on the relation of combined functional loss to permanent total disability. The commissioner, in establishing the award, used the following reasoning:

> "A preponderance of medical opinion in this case fixes loss of use in one injured member at 25%, and in the other at from 33⅓% to 35%. This may be true as to technical loss of function. What is the effect, however, of such loss? With 5% physical impairment, the average man would hardly be handicapped to any extent in manual employment. This might be true with 10% loss. If he were previously unusually well equipped physically, he might lose 20% of function and still hold his job as an ordinary workman. But when a man has sustained a functional loss from 25% to 35% his relations with employment are inevitably revolutionized. To say that this man, so manifestly impaired in earning capacity, shall have his claim for compensation adjusted upon the basis of one-fourth of the loss of a hand and one-third the loss of a leg, is absolutely grotesque, if it is the intent of the law to deal with a workman on the basis of his loss of earning power.
>
> "This claim should not be adjusted upon the basis of schedule allowance for individual members. Under the law, the loss of a leg and a hand in a single accident is classed as total permanent disability, carrying with it compensation to the limit of four hundred weeks. When these members sustain such loss of function as to establish a substantial measure of total permanent disability, settlement must be upon the basis of such impairment. It is evident to the Commissioner that the loss of earning power on the basis of measure of total permanent disability should be fixed at not less than 50%."

Similarly in Kentucky[3] where an employee was badly injured about the head, rendered cross-eyed, and made subject to dizzy spells, the board found from their experience in this class of cases that the partial disability was practically 50% of a permanent total disability, and awarded compensation accordingly.

[1] *Olmstead* v. *Lamphier*. 104 Atlantic 488.
[2] *Daily* v. *Iowa Gas & Electric Co.* Iowa. Workmen's Compensation Service, 4th Biennial Report, p. 177.
[3] *Powers* v. *Rex Coal Co.* Kentucky. Workmen's Compensation Board. Leading Decisions. 2nd Report, p. 73.

Elements in Determining Loss of Earning Capacity

Generally speaking, the loss of earning capacity is the basis of compensation in cases of partial disability in which the schedule does not determine the award.

The question often arises as to whether an employee's disability should be measured by his loss of earning capacity in the particular employment he was engaged in at the time of accident or in all employments for which he may be fitted. The Iowa commissioner[1] has held that

> "It is not necessary in the adjudication of compensation claims that a miner's disability be measured on the basis of his ability to work in a mine, no more than in the case of a lineman that his disability must be estimated by his ability to climb poles. The same principle obtains in case of loss of the members that would entirely disqualify a man for service in the particular line in which he has been engaged. General usefulness is the test as to the measure of earning capacity."

A similar rule was established in a New York case[2] in which the following opinion is expressed:

> "The fact, if it existed, that the injuries barred the claimant from the employment or the particular occupation or vocation he was engaged in when he received them does not, in and of itself, tend to prove that the hand or the use of it was lost..... In the case at bar, the hand, or the use of it, was not lost, provided it could fulfill, in a degree fair and worth considering, in any employment for which the claimant was physically and mentally fitted or adaptive, its normal and natural functions."

On the other hand we find decisions holding that impairment of earning capacity in the particular employment in which the employee was engaged at the time of accident is the measure of disability regardless of ability to work in other occupations. Thus in Wisconsin a shingle shriver lost a thumb and a finger, and in interpreting the statute he was awarded compensation for permanent total disability because his injuries totally incapacitated him for work as a shingle shriver. The Wisconsin Supreme Court, however, said:[3]

> "It is not very probable that it was intended (by the legislature) to give an employee who lost a thumb and a finger of the left hand the same compensation that he would be entitled to had he been so maimed that he was totally incapacitated from doing any kind of work."

[1] *Kennedy* v. *National Union Coal Mining Co.* Iowa. Workmen's Compensation Service. 4th Biennial Report, p. 144.
[2] *Grammici* v. *Zinn.* 219 N. Y. 322.
[3] *Mellon Lumber Co.* v. *Industrial Commission.* 142 N. W. 187.

The Wisconsin law was amended later so that compensation is now measured by the loss of wage in any suitable employment.

According to an opinion of the Colorado Supreme Court,[1]

> "Age, education, training, general physical and mental adaptability may and often should be taken into consideration in arriving at a just conclusion as to the percentage of impairment of earning capacity."

A similar measure of disability was adopted in a Kentucky case[2] in which the board stated:

> "It is difficult for the Board to determine the per cent of impairment caused by the injured back and the per cent attributable to impaired kidneys and eczema and hernia. We conclude, after considering [the claimant's] advanced age, his occupational opportunities and the general condition of his health, that at the time of injury he was probably impaired to the extent of 40% of normal."

The Ohio commission follows the rule[3] established by the attorney general of the state in estimating the loss of earning power, viz.:

> "The average weekly wage of an employee at the time of his injury, the wages he earns since his injury, his physical condition, the nature of his work, his intelligence and age, are factors to be considered in determining impairment of earning capacity."

In this connection the Ohio commission has held[4] that

> "an employee is not entitled to compensation for partial disability under the provisions of this section after he enters upon some employment in which he earns as much or more than he received prior to the date of his injury."

The California commission has developed and adopted a "Schedule for Rating Permanent Disabilities under the Workmen's Compensation Insurance and Safety Act." This schedule consists of a number of tables, the first of which enumerates in detail the nature of the disability from the anatomical standpoint. Other tables list occupations and industries, and still others give the percentage disability when the nature of the injury, the age and occupation are known. This schedule is more comprehensive than that of any other state.

The schedule of compensation for permanent partial disability will be found on page 117 under Dismemberment.

[1] *Globe Indemnity* v. *Industrial Commission.* 186 Pacific 522.
[2] *Hollon* v. *Jackson Lumber & Supply Co.* Kentucky. Workmen's Compensation Board. Leading Decisions, 2d Report, p. 143.
[3] Ohio. Opinions, Attorney General, 1912. Vol. 1, p. 752.
[4] *In re Burns.* Ohio. Bulletin of the Industrial Commission. Vol. 1, No. 7, p. 5

Loss of Earning Capacity

The basis of compensation being loss of earning capacity, a New Jersey employer objected to an award for permanent partial disability when an employee was re-employed at the same wage as before the accident, and appealed his case to the state Supreme Court. The court in sustaining the award said:[1]

> "It may well be that for a time an injured employee might be able to earn the same wages as before the accident, but, as we read the act, the disability intended thereby is a disability due to loss of a member, or part of a member, or of a function rather than to mere loss of earning power. Even if this were not so, it does not follow that the injured employee had not sustained a distinct loss of earning power in the near or not remote future and for which the award is intended to compensate."

In another case the same court said:[2]

> "The term 'disability' is not restricted to such disability as impairs present earning power at the particular occupation but embraces any loss of physical function which detracts from the former efficiency of the body or its members in the ordinary pursuits of life."

The New Jersey cases above quoted were used as precedents for a similar ruling by the Iowa commissioner.[3]

In a Kansas case, the partially disabled employee, after recovery, obtained employment which paid him greatly in excess of what he had previously received but he was awarded a statutory minimum of $3 per week to cover loss of earning capacity. In supporting this award the Supreme Court held:[4]

> "A minimum of $3 a week was prescribed not because it would in each case be in accord with precise justice, but because as a general thing this was deemed a fair lower rung for the ladder of allowances. While aiming at a thing named compensation, no way was found to avoid in every instance certain inequities or to provide in advance that judgments of courts might never turn out to be in the light of subsequent developments, slightly excessive or slightly lacking in sufficiency. Although the method of settlement and adjustment should have been, and was doubtless intended usually to be, without resort to the courts, it seems to have been considered that in any case of partial incapacity the traffic, otherwise the public, could and should bear at least $3 a week. While partially disabled, should a workman by some happy revolution of the wheel of fortune, by entering a profession, or by obtaining a light, but lucrative position, be placed beyond the need of the

[1] *DeZeng Standard Co.* v. *Pressy*. 86 N. J. 469.
[2] *Burbage* v. *Lee*. 87 N. J. 36.
[3] *Brickley* v. *Sheets Co.* Iowa. Workmen's Compensation Service. 4th Biennial Report, p. 150.
[4] *Dennis* v. *Cafferty*. 163 Pacific 461.

$3 allowance, no means has been provided for its detachment from the aggregate of his income. But this occasional plethora must be of comparatively short duration, and no serious results can follow."

Under the Michigan law the test of disability is the ability to earn in the same employment. So where the claimant,[1] through his skill and training, was able to perform work and receive wages in excess of those formerly earned, it was no bar to compensation because he was still totally disabled from performing the work he was engaged in when injured. Another employee who injured his hand,[2] upon return to work, was engaged in duties different from those before his injury and after attending a school, increased his wages. Here a claim that compensation be stopped was granted but the Michigan Supreme Court emphasized that this action was not due to the increased wages earned in other work, but because medical testimony was to the effect that he now could earn the same as before the accident in the same kind of employment.

Where a similar question arose in Nebraska the Supreme Court ruled:[3]

"If an employee after his injury receives the same or higher wages than before, ordinarily that would indicate that his earning power had not been impaired. Such evidence, however, would not necessarily be conclusive, since after the injury he might for various reasons receive higher wages, though his earning power had been impaired by the injury. A general advance in wages might enable the injured employee to secure the same wages after as before the injury, though partially disabled. In the present case it is a reasonable inference from the evidence that plaintiff received higher wages because he had by education and training fitted himself for more remunerative employment. There is evidence tending to show that he is unable to perform the duties of his former employment. The evidence justifies a finding that his earning capacity has been impaired."

In another instance where there was no loss of earnings because the workman in his disabled condition continued to work, the award was sustained by the Kansas Supreme Court. The Kansas law provides a two-week waiting period of which the workman did not take advantage. The court held[4]

"It would never do to say that the courageous workman who sticks to his task notwithstanding his pain and injury is to be penalized for so doing. Neither would it do to say that

[1] *Geis* v. *Packard Motor Car Co.* 183 N. W. 916.
[2] *Woodcock* v. *Dodge Brothers.* 181 N. W. 976.
[3] *Epsten* v. *Hancock-Epsten Co.* 163 N. W. 767.
[4] *Raffaghelle* v. *Russell.* 176 Pacific 640.

an injured workman who in pain and distress and with the gratuitous help of his fellow workman can still earn as much as he was wont to do before his strength and vigor were impaired is not entitled to compensation. A workman who is injured is not compelled to lay off then and there for two weeks under the act. The soldier who is wounded, but still 'carries on' is looked upon as a hero; the injured workman who likewise attempts to 'carry on' will lose nothing by so doing when his rights become a matter of judicial determination."

However, where there is a loss of wages due partly to injuries received and partly to business depression the court in Massachusetts said:[1]

"In the case at bar there is a specific finding that the employee is now earing $13.20 instead of $15 because of dullness in trade. The statute contemplates compensation for diminished capacity to earn wages and the injured employee, in common with others, must bear the loss resulting from business depression."

It has been held that there is no loss of earning capacity when it appears that an injured employee received the same or higher wages on his return to work, and no compensation was allowed for partial disability by the Virginia commission[2] in such cases except where an actual severance of a member has resulted. The commission ruled, however, that should the claimant later find that his injury resulted in decreased earning capacity due to the accident, he might file an application to reopen the case.

In Massachusetts the inability to find work after recovery from accidental injuries also has been compensated, the Supreme Judicial Court ruling[3]

"The object of our statute was to give compensation for a total or partial loss of the capacity to earn wages. If, as in this case, the injured employee by reason of his injury, is unable, in spite of diligent efforts to obtain employment, it would be an abuse of language to say that he was still able to earn money. He has become unable to earn anything, he has lost his capacity to work for wages and to support himself, not by reason of any change in the market conditions, but because of a defect which is personal to himself and which is a direct result of the injury that he has sustained."

The fact that an employer retained the injured workman in his employ at the same scale of wages as paid previous to the accident was held not to be a proper measure of loss of earning

[1] *In re Durney.* 111 N. E. 166.
[2] *Milligan* v. *Stonega Coke & Coal Co.* Virginia. Industrial Commission Opinions. Vol. 1, p. 77.
McCormick v. *duPont de Nemours.* Virginia. Industrial Commission Opinions. Vol. 1, p. 177.
[3] *In re Sullivan.* 105 N. E. 463.

capacity in a California case because the employer may change his mind or the workman may wish to discontinue with such employer. In the opinion of the commission in that state,[1] ratings and awards must be made with sole reference to the effect of the injury upon the ability of a man securing employment in an open labor market and with regard to the impairment of physical efficiency for the remainder of his life.

A different attitude was adopted by the Pennsylvania board[2] where injury resulted in ankylosis of the knee. A further award for partial disability on this account was refused because the injury did not affect the workman's earning capacity and he had suffered only a little inconvenience from the injury.

An interesting case on the question of loss of earning capacity was decided by the Massachusetts board. In this case[3] the employee suffered a serious injury to his back and after a period of disability he returned to light work at which he was able to earn full wages. About two and a half years later, during a period of industrial depression, he was discharged, and was unsuccessful in finding elsewhere work he could perform because of his incapacity caused by the injury. The board held that employee's compensation right continues for a period of 500 weeks from the date of injury. If for a time he is able to earn full wages, his right to compensation is suspended, but the right to compensation revives and becomes operative if, through no fault of his own but because of incapacity due to injury, he is unable to continue his work.

[1] *Immel* v. *American Beet Sugar Co.* California. Industrial Accident Commission. Decisions. Vol. 2, p. 312.
[2] *Kovar* v. *Pittsburgh Plate Glass Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 287.
[3] *Cabral* v. *Massasoit. Weekly Underwriter.* Vol. 100, No. 10, March 8, 1919, p. 361.

XIX

DISMEMBERMENT AND LOSS OF USE

Considerations Governing Compensation

There are two primary considerations which govern compensation for dismemberment: (1) the amount of tissue removed and (2) the possibilities of function in the part remaining. In some states the law is very specific in the description of the type and extent of dismemberment for which compensation will be paid, stating for example, the amount to be paid for the loss of different joints of the fingers, for the loss of forearm between wrist and elbow, arm between elbow and shoulder, etc.; while the laws in other states refer in more general terms to the amputation of a hand, arm, foot or elbow. The more strictly worded laws leave the administering boards little discretion regarding the awarding of compensation for such injuries. In fourteen states[1] awards are based upon the amount of tissue removed.

The law in Kentucky states that compensation shall be paid for 200 weeks for the loss of a leg and for 125 weeks for the loss of a foot. In a case[2] coming before the board in which the worker had lost his foot and a portion of the leg, the board held that as the law gives a value of 125 weeks to the foot and 200 weeks to the leg, the leg above the foot is valued at 75 weeks. Amputation of the leg at different heights above the ankle therefore calls for increasing amounts of compensation, regardless of the usability of the remaining stump.

Among surgeons the "point of election" for amputations is well defined and taken advantage of whenever possible in performing such operations. By operating so as to save the greatest amount of tissue, thereby reducing the amount of compensation, the stump remaining may be practically useless for the fitting of an artificial limb, whereas an operation at the surgical point of election, regardless of the amount of tissue actually removed, would result in less permanent disability and a quicker return to productive employment.

[1]Idaho, Indiana, Kentucky, Maine, Michigan, Montana, Nevada, New Jersey, North Dakota, Ohio, Oregon, Pennsylvania, South Dakota, Washington.
[2]*Jim Reed* v. *U. S. Coal & Coke Co.* MS.

In six states[1] the function of the stump remaining after amputation is given primary consideration; while in five states[2] the questions of loss of tissue and remaining function are both given consideration in arriving at a decision.

Anatomic Limitations of Amputated Members

The anatomic boundaries of different parts of the extremities vary in the laws of different states. In some states the hand ends at the wrist, in others it includes all tissue to the elbow. In like manner the foot varies from ankle to knee. Limitations of the arm are naturally dependent upon those for the hand, in some states the arm extending to the elbow, in others including all tissue to the wrist. The leg may include tissue only to the knee, or it may extend to the ankle. In several of the states compensation varies for loss of different parts of a member. In two states[3] laws contain the provision that amputation between two joints shall be estimated as amputation at the joint nearest to the point of amputation. Amputations between the knee and hip are excluded from this provision. In only one state, West Virginia, is the complete anatomic classification of hand, forearm, arm, foot, leg and thigh, recognized in the law.

The differences here discussed are presented in Table 9.

Interpretation of Schedules

The schedule for loss of members is clear in all statutes but its application to the individual injury often involves more or less controversy in order to determine under which item the injury is to be compensated. Loss by severance of a hand or foot is not necessary to entitle one to compensation. The statutes of twenty states[4] specify that "loss" and "loss of use" are the same, while in the other states having compensation laws the courts have adopted the rule that loss of use of a member is equivalent to the loss of the same. The exception to this rule is Maine, the Supreme Court of that state holding that loss meant physical loss.[5]

[1]Alabama, Minnesota, Nebraska, Oklahoma, Utah, West Virginia.
[2]Illinois, Iowa, New York, Vermont, Virginia.
[3]Colorado, Wisconsin.
[4]Alabama, Colorado, Connecticut, Delaware, Illinois, Indiana, Maryland, Minnesota, Montana, Nebraska, Nevada, New Mexico, New York, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Wisconsin.
[5]*In re Merchants.* 106 Atlantic 117.

TABLE 9: ANATOMIC LIMITATIONS FOR DISMEMBERMENT PURPOSES UNDER WORKMEN'S COMPENSATION LAWS

(National Industrial Conference Board)

State	Hand	Arm	Foot	Leg
Alabama	To elbow	No limit	To knee	No limit
Arizona	No specific classification			
California	No specific classification			
Colorado	To wrist	Forearm-wrist to elbow Arm-elbow to shoulder	To ankle	At or near hip[a] Between knee and hip[b]
Connecticut	To elbow	Elbow to shoulder	To knee	Knee to hip
Delaware	To elbow	Elbow to shoulder	To knee	Knee to hip
Georgia	No limitation	other than hand, arm,	foot, leg	
Idaho	To wrist	Wrist to shoulder	To ankle	Ankle to hip[a]
Illinois	No limitation	other than hand, arm,	foot, leg	
Indiana	To elbow	Elbow to shoulder	To knee	Knee to hip
Iowa	No limit	"Loss of ⅔ arm between elbow and shoulder"	No limit	"Loss of ⅔ leg between knee and hip"
Kansas	To elbow	Elbow to shoulder	To knee	Knee to hip
Kentucky	No limitation	other than hand, arm,	foot, leg	
Louisiana	To elbow	No limit	To knee	No limit
Maine	No limitation	other than hand, arm,	foot, leg	
Maryland	To elbow	Elbow to shoulder	To knee	Knee to hip
Massachusetts	At or above wrist	No limit	At or above ankle	No limit
Michigan	No limitation	other than hand, arm,	foot, leg	
Minnesota	No limit	Arm Arm below elbow	No limit	No limit
Montana	To wrist	Wrist to shoulder	To ankle	Ankle to hip[a]
Nebraska	To elbow	At or above elbow	To knee	At or above knee
Nevada	Major or minor	Major or minor	No limit	No limit
New Hampshire	No specific classification			
New Jersey	No limitation	other than hand, arm,	foot, leg	
New Mexico	Dextrous and non-dextrous	Dextrous and non-dextrous Wrist to shoulder	To ankle	Ankle to hip[a]
New York	To elbow	At or above elbow	Between knee and ankle	At or above knee
North Dakota	To elbow	At or above elbow	To knee	At or above knee
Ohio	No limitation	other than hand, arm,	foot, leg	
Oklahoma	To elbow	At or above elbow	To knee	At or above knee
Oregon	At or above wrist	At or above elbow	At or above ankle	At or above knee
Pennsylvania	To elbow	At or above elbow	To knee	At or above knee
Rhode Island	At or above wrist	No limit	At or above ankle	No limit
South Dakota	No limitation	other than hand, arm,	foot, leg	
Tennessee	No limitation	other than hand, arm,	foot, leg	
Texas	No limit	At or above elbow	No limit	At or above knee
Utah	No limit	Wrist to shoulder	To ankle	Ankle to hip[a]
Vermont	At or above wrist joint	At or above elbow	At or above ankle	At or above knee
Virginia	No limitation	other than hand, arm,	foot, leg	
Washington	Major	Major—At or above elbow	No limit	Below knee to hip[a]
West Virginia	No limit	Forearm—Arm	Foot	Leg—Thigh
Wisconsin	No limit	Forearm—Lower half Arm—Elbow to shoulder	To ankle	Ankle to hip[a]
Wyoming	No limit	Elbow to shoulder	No limit	Below knee Above knee

[a] "At or near hip" so as to exclude use of artificial limb.
[b] "Between knee and hip" so as to permit use of artificial limb.

Fingers

The statutes of twenty-one states[1] provide that loss of one phalanx constitutes loss of half a finger, and loss of more than one phalanx shall be compensated as the entire loss of the finger.

In four states[2] the loss of one phalanx is equivalent to loss of one-third, and the loss of two phalanges the loss of two-thirds of a finger or toe. Loss of one phalanx of thumb or great toe equals loss of one-half of such member. In Louisiana the law provides that two phalanges must be lost to equal the loss of one-half of a finger or toe. In North Dakota the loss of any part is considered as loss of the entire member.

Whether the phalanx was lost was the dispute in an Illinois case.[3] Here medical testimony showed from examination of the finger and the X-ray that about one-sixteenth of the bone of the first phalanx of index finger was missing, and that the injury did not interfere with the use of the distal joint. The Supreme Court said:

> "While we are of the opinion that a liberal interpretation should be given to this clause in all cases, yet such interpretation should not go to the extent of being absurd. Substantially all or part of finger designated in provisions in the Statute must be lost."

A decision of the New York court[4] holds that the major portion, or more than half of a phalanx of a finger, which means a finger bone as distinguished from the flesh, must be removed before same is substantially lost so as to constitute "loss of first phalanx." The same ruling was followed in another case.[5]

The statutory provision for specific awards for amputation in twenty-five of the states[6] is either that the "loss of the greater part of a phalanx shall be construed as the loss of a phalanx," or words to that effect. The interpretation of this phrase has been called in question where the amputation comes exactly in the middle of a phalanx. The Connecticut commissioner, 1st District,[7] made no award in such a case because one-half is not the

[1]Alabama, Illinois, Indiana, Iowa, Kansas, Maine, Michigan, Minnesota, Nebraska, Nevada, New Jersey, New York, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Tennessee, Texas, Vermont, Virginia.

[2]Connecticut, Kansas, Kentucky, Maryland.

[3]*McMorran* v. *Industrial Commission.* 125 N. E. 284.

[4]*Forbes* v. *Evening Mail.* 185 N. Y. Supp. 592.

[5]*Tetro* v. *Superior Printing and Box Co.* 172 N. Y. Supp. 722.

[6]Alabama, Connecticut, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Nebraska, Nevada, New Jersey, New York, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Tennessee, Texas, Vermont, Virginia, Wyoming.

[7]*Ahern* v. *Colt Patent Fire Arms Co.* Connecticut. Compensation Decisions. Vol. 3, p. 134.

greater part. However, in this case it was stated that loss of the phalanx was a matter for the commissioner to decide, basing his decision upon surgical opinion. The presence of ankylosis, severed tendons or other conditions which limited the use of the finger or rendered it useless should have equal weight with the amputation of a portion of the phalanx in determining the amount of compensation. It was also held that the legislature did not intend that a proportionate award be made for a fractional part of a phalanx. A workman has either lost all or no part of a phalanx.

An award was made by the Connecticut commissioner, 3rd District, for loss of half a finger.[1] The facts in this case reveal that the terminal phalanx became stiff and half of the finger became numb upon exposure to cold and difficulty was encountered in grasping and picking up objects with the injured member. This award was in compliance with the statutory requirement of loss or loss of use of the greater part of a phalanx.

The Pennsylvania act makes no award for the loss of a finger as such, but bases awards upon loss of earning capacity due to the injury. In cases where the index finger was lost by separation nothing was allowed for dismemberment but the award was made entirely upon the basis of lost wages.[2] In these cases there was no loss of earning capacity and compensation was paid only for the period of temporary total disability.

A general rule that the loss of more than one phalanx constitutes the loss of a finger is exemplified by an Oklahoma case[3] in which the claimant was awarded compensation for the loss of a thumb, his injury requiring the removal of the first and part of the second phalanx.

Where the distal phalanx and a small triangular piece of bone (three-eighths inch on longest side) of the second or proximal phalanx were removed, the New York Supreme Court[4] did not allow compensation for loss of finger because of injury to the proximal phalanx, since it was apparent that the slight injury to the proximal phalanx was substantially not the loss of such

[1]*Torrey* v. *American Telephone and Telegraph Co. Weekly Underwriter.* Vol. 100, No. 13, March 29, 1919, p. 470.

[2]*Macosky* v. *Pennsylvania Stove Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 2, p. 39.

Fernandez v. *Baldwin Locomotive Works.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 238.

[3]*Smith* v. *Francis Vitric Brick Co.* Oklahoma. Industrial Commission Reports. Vol. 2, p. 177.

[4]*Baron* v. *National Metal Spinning and Stamping Co.* 169 N. Y. Supp. 337.

phalanx. It was held to be not the intention of the legislature to apply a different rule to the proximal phalanx than applies to the distal, and the award of the industrial board for loss of the finger based upon statutory provision of the compensation act for loss of more than one phalanx was reversed.

Ankylosis or stiffening of the joints of the index finger was not compensated in New York as loss of a finger. The Court held[1] that while there was evidence that the finger was permanently stiff, there was no evidence that this rendered it useless or destroyed its efficiency; it was therefore ruled that the award should be for only 66⅔% of the difference in wage earning capacity during the continuance of the disability but not exceeding the compensation allowed for the loss of a finger.

On the contrary, in Michigan the Industrial Accident Board ruled[2] that stiffness of a finger resulted in loss of use of such finger and compensation was accordingly allowed. The fact that the surgeon did not amputate the injured finger, which in propriety could have been done, did not preclude the award for total loss.

In a New York case[3] a sewing machine operator punctured her third finger. Blood poisoning followed which necessitated amputation of the first phalanx, but cellulitis set in, rendering the remaining part of the finger practically useless. The award, sustained by the Supreme Court, was based on the entire loss of the finger.

No compensation was allowed[4] in Connecticut for the loss of a sixth finger, which was considered a detriment rather than an advantage.

Loss of Several Fingers

The method of estimating percentage disability when more than one finger is lost varies with the different commissions. Some states have followed the method of awarding compensation for each finger on the basis of that injury alone, the total compensation being the sum of amounts awarded for each finger. Other states have estimated the disability as a certain percentage of the loss of a hand and have awarded compensation on that basis.

[1]*Sugg* v. *Erie R. R.* 167 N. Y. Supp. 390.
[2]*Lardie* v. *Grand Rapids Show Case Co.* Michigan. Industrial Accident Board. Workmen's Compensation Cases. July, 1916. p. 17.
[3]*Feinman* v. *Albert Manufacturing Co.* 170 App. Div. 147.
[4]*Drapeau* v. *Stoddard.* Connecticut. Compensation Decisions. Vol. 1, p. 590.

The New York board has adopted the following schedule of suggested proportional allowances in cases of loss of two or more digits as a guide in consideration of such injuries:[1]

Digits Lost	*Per Cent of Hand*
Two Fingers:	
First and second	42
First and third	38
First and fourth	35
Second and third	32
Second and fourth	27
Third and fourth	25
Three Fingers:	
First, second and third	62
First, second and fourth	56
First, third and fourth	53
Second, third and fourth	47
Thumb and	
First finger	72
Second finger	68.5
Third finger	67.5
Fourth finger	65.4
Thumb and	
First and second fingers	87.7
First and third fingers	86.2
First and fourth fingers	83.12
Second and third fingers	81.3
Second and fourth fingers	78.2
Third and fourth fingers	76.6
Thumb and	
Second, third and fourth fingers	88.5
Four fingers	89.4
Thumb and	
First, second and third fingers	94
First, second and fourth fingers	91
First, third and fourth fingers	90.2
Thumb and	
Four fingers	100

And Be It Further Resolved, That the allowances herein provided may be and shall be increased where the injury is greater than that prescribed because of involvements beyond those described in the schedule, e. g., in the cases of metacarpal or palmar involvements, of ankylosis, of adherent scars, etc., etc."

The Appellate Division of the Supreme Court ruled,[2] however, that the above schedule must be used as a guide only and that it "cannot furnish the sole basis for the rendering of a decision as to a particular loss sustained." In this case an award of 72%

[1]New York. Department of Labor. Special Bulletin No. 98, p. 9.
[2]*Bubniak* v. *Stewart & Sons.* 198 App. Div. 112.

loss of hand was made when the first phalanx of the first finger and the greater portion of the second phalanx of the thumb were lost. Continuing, the court said:

> "The difficulty with the award is that no proof was given as to the proportionate loss of use of the hand, and no independent judgment was exercised by the deputy commissioner who tried the case or the Industrial Commission which approved the award made by him. Without taking any proof as to proportionate loss the deputy commissioner made the award with the following comment: 'I hold that this hand comes clearly within the schedule adopted by the Commission.'..... It is entirely clear that the proportionate loss of use of a hand cannot in advance be determined for every case with such nicety that even a loss of use amounting to less than a fraction of one per cent can be given. It is equally clear that in the case of every individual claimant the loss of a finger and thumb, even though the physical loss be exactly the same, would impair the use of the hand to a greater degree or a less degree, depending upon the adaptability of the claimant and other considerations. While the use of the schedule may be proper to a certain extent as a general guide to prevent widely disproportionate awards, it certainly cannot furnish the sole basis for the rendering of a decision as to a particular loss sustained. To accord to it such virtue would be tantamount to holding that the Industrial Commission was invested with legislative powers. We do not think that this award, which was based exclusively upon the schedule and involved no exercise of judgment upon the part of the Industrial Commission or the deputy commissioner, can be sustained."

The Michigan Supreme Court[1] affirmed an award for the loss of several fingers of a hand in which compensation was allowed on the basis of the statutory weekly allowances for each finger lost, the aggregate award, however, not to exceed the number of weeks provided in the statute for the loss of a hand. A contrary opinion was held in Indiana,[2] where two or more fingers were lost in the same accident. In this case compensation was not determined by multiplying the statutory allowances for loss of one finger by the number of fingers lost, but was determined within the discretion of the industrial board with regard to the degree of permanent partial impairment of the hand. There is a similar ruling in Utah[3] where an award was made for proportionate loss of use of the hand and not for loss of individual fingers.

The same attitude was taken by the Minnesota Supreme Court[4] where the little finger was amputated at the middle of

[1] *King* v. *Davidson*. 161 N. W. 841.
[2] *In re Maranovitch*. 117 N. E. 530.
[3] *North Beck Mining Co.* v. *Industrial Commission*. 200 Pacific 111.
[4] *State ex rel Broderick* v. *District Court of Ramsey County*. 174 N. W. 826.

the metacarpal bone and the third metacarpal bone was fractured. It was held that although the compensation act makes express provision for the loss of fingers, it did not, of necessity, follow that this case should be treated as the loss of third and fourth fingers only. Where the nature of the injury shows reduction of power and usefulness of the hand the award of loss of one-half the use of the hand will stand. A similar ruling and facts are found in a Nebraska case.[1]

Hand

The Massachusetts Supreme Judicial Court held[2] that incapacity to use the hand need not be tantamount to actual severance and that

> "Where a hand cannot be used in its ordinary manner, but can be used only as a hook, it is 'incapable of use' within the meaning of the Act."

This decision is cited and also followed by the Pennsylvania board[3] in a case where an employee lost two phalanges of the second and third fingers and one and a half phalanges of the other two fingers. An award was made for the loss of the hand because "there is no practical efficiency or earning power left in the hand." The opinion continues:

> "That after practice, the injured employee might perform some necessary personal services to himself such as to feed and dress himself, is not sufficient use of the hand as is contemplated by the relation of employer and employee in a manual occupation and such occupation as must be considered in this case; nor does it show practical earning power that the hand and stumps of the four injured fingers must be used as a hook to carry certain things. And the mere speculative opinion that under certain assumed conditions and circumstances and after indefinite practice, the claimant could use in a limited way, a shovel, handle a pen or pencil, control the lever of a machine, or feed a punch press where the objects are light, does not in our opinion show any practical and substantial capacity in the injured hand. And that generous and kindly disposed employers are willing to take the employee back into their employ at his former wages is not material nor controlling in arriving at a decision as to the permanent loss of the use of the hand where the injury to the four fingers of the hand is permanent and the loss of the principal parts of the fingers complete."

In a New York case,[4] the board awarded compensation for

[1] *Updike Grain Co.* v. *Swanson.* 174 N. W. 862.
[2] *In re Meley.* 106 N. E. 559.
[3] *Maseth* v. *Hubbard & Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 102.
[4] *Grammici* v. *Zinn.* 219 N. Y. 322.

loss of the hand where the first, second and third fingers and the first phalanx of the fourth finger had been lost. The Supreme Court, in reversing the award in one of its leading decisions, said in part:

> "It is a matter of common observation and knowledge that a hand, arm, foot or leg incompetent through injury for certain employments is competent and useful for other employments. The expression 'loss' and 'loss of the use' as used in the law should be given their unrestricted and ordinary meaning. In the case at bar, the hand or the use of it was not lost provided it could fulfill in a degree fair and worth considering in any employment for which the claimant was physically and mentally fitted and adaptive, its normal and natural functions."

Following this reasoning, the award was based upon the schedule allowance for each finger lost. Owing to a recent amendment to the act, the award is now made for partial loss of hand only, where the result of such an injury is not considered as the loss of an entire hand.

The *Grammici* v. *Zinn* decision was followed by the Delaware Supreme Court in a case[1] in which the facts were very much the same, and where it was held that there was no loss of the hand but that the injuries should be compensated as partial disabilities. In this case the ultimate efficiency of the hand was estimated to be 25%.

The attitude of the Massachusetts court is expressed in an award[2] for loss of a hand where it was so cut as to sever most of the flexor tendons. In this case the court said:

> "Incapacity of use need not be tantamount to an actual severance of the hand; it is enough that the normal use of the hand has been entirely taken away."

In Pennsylvania[3] a carpenter who lost the first three fingers of his right hand, was awarded compensation for the loss of his hand, the award being based on the interpretation of the act that the result of the injury was equivalent to the loss of the hand for the purposes of his occupation and for most forms of labor. The same commission[4] also granted compensation for the loss of use of a hand in an accident which resulted in three fingers becoming stiff in an extended position. The employee therefore lost his

[1] *Frank* v. *Deemer Steel Castings Co.* Delaware. Digest of Workmen's Compensation Cases. 1918-1919, p. 67.
[2] *In re Meley.* 106 N. E. 559.
[3] *Erdman* v. *Eagles.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 2, p. 514.
[4] *Glaser* v. *Canfield.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 227.

gripping power and was unable to perform work for which he was fitted.

The Virginia commission held[1] that the dividing line between loss of fingers and loss of hand comes at the joint between the metacarpal bones and phalanges and although all four fingers of the hand were amputated compensation must be based on the loss of fingers because no portion of the metacarpal bones was removed save such slight portions as are usual and necessary in amputating at the metacarpo-phalangeal joints. However, in another Virginia case[2] where the middle, ring, and little fingers of the right hand were amputated, together with a portion of the corresponding metacarpal bones so that part of the palm was amputated at the same time, it was held that such loss constituted half of the hand and an award was made for one-half of the statutory provision for loss of the hand.

A Michigan case[3] involved the loss of four fingers and the palm of a hand leaving the thumb. The court held that, although the entire hand had not been lost, the remaining part was rendered useless by reason of the loss so that an award should stand for loss of a hand, as provided in the schedule of specific indemnities. As the human hand is primarily adapted for purposes of prehension or grasping, the court held that when this function was lost the employee had lost his hand for all practical purposes. A like award was made in Oklahoma[4] for a similar injury.

A carpenter's hand was badly crushed, disabling him for work in his trade. An appeal was entered from the award of the commission for loss of use of three fingers, the claim being that according to medical testimony 50% of the use of the hand had been lost. In this case the Nebraska Supreme Court[5] sustained an appeal and granted 50% of the statutory schedule for loss of hand. A similar case is reported from Minnesota.[6]

The Oklahoma commission held[7] complete loss of use of the hand under the following facts: fourth finger lost, movement of other three fingers restricted, thumb capable of some flexion, hand smaller than the other and atrophied, tendons shortened,

[1] *Harris* v. *Purity Ice Co.* Virginia. Industrial Commission Opinions. Vol. 1, p. 159.
[2] *Bowles* v. *Virginia Bridge & Iron Co.* Virginia Industrial Commission Opinions. Vol. 1, p. 179.
[3] *Lovalo* v. *Michigan Stamping Co.* 167 N. W. 904.
[4] *Bristow Cotton Oil Co.* v. *Industrial Commission.* 188 Pacific 658.
[5] *Updike Grain Co.* v. *Swanson.* 174 N. W. 862.
[6] *State ex rel Broderick* v. *District Court of Ramsey County.* 174 N. W. 826.
[7] *Ellis* v. *Midland Bridge Co. Weekly Underwriter.* Vol. 100, No. 11, March 15, 1919, p. 402.

poor circulation affecting hand especially in cold weather and very little grasping power in the hand.

In a Massachusetts accident[1] a hand was crushed, leaving a slight amount of motion in the thumb and index finger, but the other fingers were paralyzed and the circulation impaired so that the hand frequently "went to sleep." As the ability to use the hand was negligible an award was sustained for the entire loss of the hand.

Arm

A general provision in the schedules of specific awards is that amputation of the arm between the wrist and elbow shall be considered the equivalent of loss of a hand and amputation at or above the elbow as the loss of the arm. The schedule in five states[2] makes a finer distinction, compensation varying for the loss of a hand at the wrist, for arm between wrist and elbow, arm between elbow and shoulder and arm at or near shoulder.

When the loss of the forearm by amputation results in atrophy of the muscles of the arm, thereby greatly restricting its use, compensation has been granted for loss of the entire arm.[3]

A Minnesota County Court awarded consecutive compensation for concurrent injuries to the hand and the arm. The state Supreme Court[4] held this wrong and required that an estimate be made of the entire injury and compensation awarded on the basis of a percentage of total disability of the arm as a whole.

Foot

Loss of use of the foot was the basis of compensation in a Pennsylvania case[5] where the foot was crushed, resulting in a completely broken arch impairing the action of the foot, loss of motion of the toes and loss of power to spring on the toes, which is a necessary movement in walking. For a similar injury the Minnesota Supreme Court[6] refused to affirm an award for loss of the foot because the foot was still there, but authorized compensation in proportion to the percentage of total loss.

Where, as the result of a fall from a ladder, a painter was able to walk and stand but unable to ascend ladders, claim was

[1] *Floccher* v. *Fidelity and Deposit Co.* 108 N. E. 1032.
[2] Idaho, Montana, New Mexico, Utah, Wisconsin.
[3] *Stocin* v. *Wilson Body Co.* 171 N. W. 352. Michigan.
Pater v. *Superior Steel Co.* 106 Atlantic 202. Pennsylvania.
[4] *State ex rel Kennedy* v. *District Court of Clay County.* 151 N. W. 530.
[5] *Holm* v. *United Eelectric Construction Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 168.
[6] *State ex. rel Wunder* v. *District Court of Hennepin County.* 161 N. W. 391,

denied[1] in a New York court for loss of use of foot inasmuch as the claimant could use it in other employments.

What portion of a foot must be lost by amputation to be compensable as loss of entire foot was a question before the Pennsylvania board.[2] In this case the employee suffered amputation of his foot at a point 4½ inches from end of the toes and about ¾ of an inch in front of line of the leg. The ankle and heel were left unimpaired. In granting an award for loss of the foot the board said:

> "The amputation interferes with claimant's walking for the reason that he does not have the spring that he had from use of the ball of the foot and the toes, and his walking now is about the same as he would have from the use of an artificial limb or a peg leg."

Amputation of the foot at the instep was held as loss of the foot in Indiana,[3] and a similar injury was considered as loss of use of the foot in Oklahoma.[4]

In contrast to the cases cited above, the Supreme Court of Maine,[5] in a similar case where the employee's toes and instep were lost by amputation but where the employee by aid of a specially constructed boot was able to step on the heel, held that he did not sustain the loss of a foot. "The statutory words 'the loss of a foot' means the loss of an entire foot and not a fractional part thereof."

Ankylosis of an ankle was held as loss of the foot and compensation was accordingly allowed by the Iowa Supreme Court.[6] But the Idaho board found[7] that a fractured ankle impaired the use of the foot by 33⅓% and, due to limited motion of the joint, an award was made for one-third of the loss of the foot.

Leg

The general statutory provision requires separation of the leg at or above the knee to be compensated as loss of leg. In an Oklahoma case,[8] however, as the result of an injury the amputation took place between the ankle and knee and compensation was awarded for loss of the leg because the employee was unable

[1] *Modra* v. *Little*. 119 N. E. 853.
[2] *Vasiloff* v. *Casey*, Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 91.
[3] *In re Cannon*. 117 N. E. 658.
[4] *Harding* v. *GalbraithDrilling Co.*, Oklahoma Industrial Commission, Reports, Vol. 2, p. 217.
[5] *In re McLean*. 111 Atlantic 383.
[6] *Moses* v. *National Union Coal Mining Co.* 184 N. W. 746.
[7] *Nilson* v. *Deming Mines Co.* Idaho. Industrial Accident Board. 2d Report, p. 83.
[8] *Bowden* v. *Midland County Gasoline Co.* Oklahoma. Industrial Commission Reports, Vol. 2, p. 66.

to use an artificial leg and the entire leg was therefore considered useless. In Illinois the commission[1] awarded compensation for loss of the leg when it was amputated ten inches above the ankle. The employer appealed, contending the award should be for loss of the foot. In affirming the award the Supreme Court stated that the law of their state made no distinction between loss of whole or part of a leg and that "loss of any substantial portion of the leg constitutes the loss of leg within the meaning of this act." Amputation at the knee joint was compensated as loss of leg by the Utah commission.[2]

However, where a leg was fractured above the knee and as a result the function of the leg was impaired so that the workman was unable to follow his employment as a miner, an award was made by the Industrial Commission of Colorado,[3] not for loss of leg but for 70% of permanent total disability, which figure was arrived at from medical testimony.

A somewhat similar ruling was made by the Michigan Supreme Court.[4] An injured employee whose leg was crushed, thereby rendering him totally disabled from engaging in the occupation in which he was injured, was awarded compensation during his disability for a period not exceeding the limits of permanent total disability prescribed by the statute as 500 weeks. The specific indemnity provided by the statute of 175 weeks' compensation for the loss of leg was held to apply only when the leg is actually taken off.

A partial loss of use of the leg was made the basis of an award in Indiana.[5] The surgeons had been unable to remove a piece of steel which had become imbedded in claimant's leg and as a result a weakened condition of the leg muscles caused a peculiar turn or twist to the foot when walking. It was held that he had lost one-third of the use of his left leg.

An employee in Pennsylvania lost the use of his foot, which became of no value in bearing his weight; he therefore made claim for loss of use of the leg. In denying this claim the board held[6] that an operation removing the foot would restore the use

[1] *Payne* v. *Industrial Commission.* 129 N. E. 830.
[2] *Wimber* v. *Spring Canyon Coal Co.* Utah. Industrial Commission. Report of Decisions. 1918-1920, p. 199.
[3] *Globe Indemnity Co.* v. *Industrial Commission.* 186 Pacific 522.
[4] *Wilcox* v. *Clarage Foundry & Mfg. Co.* 165 N. W. 925.
[5] *Studebaker* v. *Warner.* 132 N. E. 604.
[6] *Molnar* v. *Lehigh Valley Coal Co.*, Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 227.

of the leg and therefore compensation could be awarded only for loss of the foot.

Genital Organs

The loss or loss of use of external genital organs has been awarded compensation in certain cases. While none of the laws makes specific provision for this type of injury, compensation has been allowed under the clause that covers "all other cases of permanent partial disability," or under disfigurement. Decreased earning capacity due to mental condition following such injuries has also been the basis for the award of compensation.

The New York commission[1] awarded death benefits to a ship carpenter who died of pulmonary tuberculosis following a blow upon his scrotum and testicles by a ribband that he was removing from a ship, the blow having caused a tubercular abscess which necessitated removal of a testicle.

The loss of bodily function because of injury to genital organs is not compensated in Connecticut. An employee[2] who was struck in the testicle by a piece of stone while breaking rocks and afterwards developed tuberculosis in the organ, necessitating its removal, received compensation only to cover the medical treatment and period of disability. In a similar California case[3] compensation was awarded until termination of the disability. In another Connecticut case[4] the employee claimed additional compensation for loss of virility due to injury resulting in the rupture of the urethra. The Connecticut commissioner held that the claim would be denied because the right to compensation under the law must be considered purely from the standpoint of earning capacity.

In New York[5] a young man employed upon a starch mangle was so caught in the machine and injured as to be permanently disabled for performing marital functions. He brought suit against his employer and was awarded damages, but upon appeal by the employer, the Appellate Court reversed the judgment and dismissed the complaint on the ground that the plaintiff's sole

[1]*Lindfors* v. *Wheeler.* New York. Department of Labor. Special Bulletin No. 97, p. 197.

[2]*Frabbie* v. *Freeberg.* Connecticut. Compensation Decisions. Vol. 1, p. 614.

[3]*Stone* v. *F. L. Smith Co.* California. Industrial Accident Commission Decisions. Vol. 3, p. 365.

[4]*Pantalone* v. *American Brass Co.* Connecticut. Compensation Decisions. Vol. 3, p. 438.

[5]*Farnum* v. *Garner Print Works & Bleachery.* 184 App. Div. 911.

remedy was under the workmen's compensation law. The plaintiff contended that the compensation schedules did not provide a remedy for an injury of the nature suffered by him and that, therefore, his common-law right of action should be maintained.

Compensation was awarded in a Pennsylvania case[1] where the employee's injury necessitated the removal of the right testicle and also a part of the left and as a result the physical and mental condition of the claimant became affected. In this case the compensation award was based on the loss of earning capacity.

In an Indiana case[2] an employee strained himself when he slipped upon an icy floor. He was unable to work and an examination by the employer's physician revealed the fact that he was suffering from orchitis involving the left testicle. The injured organ was later removed and the employee made claim for compensation under the clause of the law covering "all other cases of permanent partial disability, including any disfigurement, which may impair the future usefulness or opportunity of the injured employee." The award of 100 weeks' compensation by the commission was reversed by the state Supreme Court with directions to modify the award, because in their opinion the compensation act did not compensate for the loss of a member but for the loss of earning capacity resulting therefrom; and in this case "notwithstanding the injury and operation, his (the employee's) earning capacity and every physical function remained unimpaired."

A contrary ruling is made by the New Jersey Supreme Court in a similar case.[3] An employee who lost one of his testicles in an explosion, was compensated by the lower court on the ground that his injury was a "permanent bodily impairment." In affirming the award, the Supreme Court said:

> "The statute, section 11, concedes the awarded compensation (1) 'where the usefulness of the member is permanently impaired,' and (2) 'where any physical function is permanently impaired.'
>
> "The lower court found that as a result of the injury, the defendant's morale, courage and marital efficiency were lessened. Whatever view the medical experts may entertain upon that phase of the case, the indisputable fact remains that the injured defendant has suffered the loss of a portion of his anatomy, which nature implanted in the human organism, as a dual reservoir of complete efficiency equally with eyes,

[1] *Sutterly* v. *Matthews*. Pennsylvania. Workmen's Compensation Board Decisions, Vol. 5, p. 195.
[2] *Centilivre Beverage Co.* v. *Ross*. 125 N. E. 220.
[3] *Hercules Powder Co.* v. *Morris County Court of Common Pleas*. 107 Atlantic 433.

ears, and limbs, and that to deprive him of one of these natural attributes is to take from him a component portion of the perfect genus homo, and to that extent at least impair the physical attributes of his manhood. This impairment may not prove to be so conspicuous in the ability to produce wages, in the industrial world, but there are other spheres for the employment of human energy, talents, and the possession of physical attributes besides the industrial world into the activity of which the defendant is entitled to bring, possess, and enjoy all the physical attributes with which nature endowed him.

"In harmony with these considerations, it has been held that the sole criterion of a disability, partial in character and permanent in quality, under the statute, is not limited to the loss of earning power.

"Whether, therefore, we consider the physical status of the injured defendant as lessened by the loss of a physical attribute, which serves to constitute the perfect genus homo, or as possessed of a dual entity which in natural and moral law he had a right to retain, as a reserve factor in the cosmic dispensation, the loss he sustained was a permanent impairment of his physical entity under the provisions of our statute and was properly compensated for as such by the award of the common pleas.

"The award will be affirmed."

Disability in Amputation Cases

Some states award compensation during the healing period in addition to the specific schedule allowance for loss of a member. Other statutes mention that the amount granted for dismemberments or "loss of use" shall be in lieu of all other compensation except the allowance for medical treatment.

In the states where the payment according to the schedule is exclusive of all other benefits except medical attention, payments for temporary disability are generally made when a period of time elapses between the injury and the amputation. An employee in Michigan received medical attention and also compensation for disability during an entire year while the doctors were endeavoring to save his limb. At the end of this time he became dissatisfied with the physicians and selected his own physician who immediately amputated the injured member sufficiently below the knee to classify the loss as that of a foot. The employer contended that payments already made should be applied against the award for loss of foot. The court held:[1]

"Not until amputation could loss of foot be an element in the case. Defendants did not and could not pay him up to that time for loss of a member which he had not lost. After

[1] *Addison* v. *Wood*. 174 N. W. 149.

TABLE 10: DISMEMBERMENT SCHEDULES UNDER WORKMEN'S COMPENSATION LAWS*

(National Industrial Conference Board)

State	Per cent of wages	Compensation in weeks												
		Thumb	Index finger	Middle finger	Ring finger	Little finger	Hand	Arm	Great toe	Any other toe	Foot	Leg	Eye	Nose
Alabama	50	60	35	30	20	15	150	200	30	10	125	175	100	....
Arizona (a)	50	....	....	....	....	....	.....	.....	....	....	....	.....	....	....
California (b)	65	....	....	....	....	....	.....	.....	....	....	....	.....	....	....
Colorado	50	35	18	13	7	9	104	139–208	18	4	104	139–208	139	....
Connecticut	50	38	38	30	25	20	156	208	38	13	130	182	104	....
Delaware	50	60	35	30	20	15	158	194	30	10	135	194	113	....
Georgia	50	60	35	30	20	15	150	200	30	10	125	175	50	....
Idaho (c)	55	30	20	15	12	9	150	160–200	15	6	125	140–180	120	....
Illinois	50–65	60	35	30	20	15	150	200	30	10	125	175	100	....
Indiana	55	60	40	35	30	20	200	250	60	10-30	150	200	150	....
Iowa	60	40	30	25	20	15	150	225	25	15	125	200	100	....
Kansas	50–60	60	37	30	20	15	150	210	30	10	125	200	110	....
Kentucky	65	60	45	30	20	15	150	200	30	10	125	200	100	....
Louisiana	60	50	30	20	20	20	150	200	20	10	125	175	100	....
Maine	66⅔	50	30	25	18	15	125	150	25	10	125	150	100	....
Maryland	66⅔	50	30	25	20	15	150	200	25	10	150	175	100	....
Massachusetts (d)	66⅔	....	....	....	....	....	.....	.....	....	....	....	.....	....	....
Michigan	60	60	35	30	20	15	150	200	30	10	125	175	100	....
Minnesota	66⅔	60	35	30	20	15	150	175–200	30	10	125	175	100	....
Montana (c)	50	30	20	15	12	9	150	160–200	15	6	125	140–180	120	....
Nebraska	66⅔	60	35	30	20	15	175	225	30	10	150	215	125	50
Nevada	50	15 mo.	9 mo.	7 mo.	5 mo.	4 mo.	40-50 mo.	50-60 mo.	7 mo.	2½ mo.	40 mo.	50 mo.	30 mo.	....
N. Hampshire(a)	50	....	....	....	....	....	.....	.....	....	....	....	.....	....	....
New Jersey	66⅔	60	35	30	20	15	150	200	30	10	125	175	100	....
New Mexico (c)	50	30	20	15	10	9	100–110	120–150	15	6	100	110–140	110	....
New York	66⅔	60	46	30	25	15	244	312	38	16	205	288	128	....
North Dakota	66⅔	60	42	36	24	18	260	312	38	16	208	286	130	....
Ohio	66⅔	60	35	30	20	15	150	200	30	10	125	175	100	....
Oklahoma	50	60	35	30	20	15	200	250	30	10	150	175	100	....
Oregon	$25 per mo.	24 mo.	16 mo	9 mo.	8 mo.	6 mo.	76 mo.	96 mo.	10 mo.	4 mo.	64 mo.	88 mo.	40 mo.	....
Pennsylvania (e)	60	....	....	....	....	....	175	215	....	....	150	215	125	....
Rhode Island (a)	50	....	....	....	....	....	.....	.....	....	....	....	.....	....	....
South Dakota	55	50	35	30	20	15	150	200	30	10	125	160	100	....
Tennessee	50	60	35	30	20	15	150	200	30	10	125	175	100	....
Texas	60	60	45	30	21	15	150	200	30	10	125	200	100	....
Utah (c)	60	30	20	15	12	9	150	160–200	15	6	125	140–180	120	....
Vermont	50	40	25	20	15	10	140	170	20	8	120	170	100	....
Virginia	50	60	35	30	20	15	150	200	30	10	125	175	100	....
Washington	Lump sum	....	....	....	....	....	$1600	$1900	....	....	....	$1300–2000	$1200	....
West Virginia (f)	50	....	....	....	....	....	.....	.....	....	....	....	.....	....	....
Wisconsin (c)	65	70	32	20	12	14	240	240–320	25	8–10	180	220–300	160	....
Wyoming	Lump sum	$225	$200	$150	$150	$150	$1000	$1200–1500	$200	$150	$1000	$1200–1500	$1500	....

*Where double figures occur, they refer to major or minor member or to different joints of same extremity.
(a) Fifty per cent of difference in earning capacity before and after injury.
(b) Compensation period based on age and occupation.
(c) Figures for fingers and toes are for loss at proximal joint.
(d) Sixty-six and two-thirds per cent of difference in earning capacity before and after injury. Also awards for specific injuries.
(e) Sixty per cent of difference in earning capacity before and after injury, except as specified.
(f) Disabilities rated in percentages and compensation paid accordingly.

amputation the injury resulting in incapacity came squarely under section allowing 125 weeks for loss of foot, which commenced on date of amputation and did not date back to the accident."

A similar ruling was made by the Wisconsin commission[1] and in Connecticut.[2]

In Utah[3] compensation for temporary disability in addition to compensation for the loss of leg was denied because the disability resulted entirely from the loss of the leg, compensation for which is specifically defined in the act and additional compensation was not justified by anything contained therein.

Where an employee lost the use of a finger by a blow from a sledge hammer and in consequence was disabled for three months before the finger was amputated, the employee asked for temporary disability for three months in addition to the fixed allowance for loss of a finger. The New York board ruled,[4] however, that the employee was only entitled to the schedule allowance for loss of a finger. "The loss of finger by amputation," it said, "covers the loss of use of finger from the time of accident occurring."

From the above illustrative cases it will be noticed that in injuries to a member resulting in less than total loss or total loss of use there are several methods of determining the award. The method, of course, depends upon the provisions and interpretation of the statute in each state. The large majority of compensation acts have a clause requiring that compensation for partial loss or partial loss of use of a member be in proportion to the payments allowed for total loss. This is common to the laws of twenty-three states.[5]

The other compensation states either make no definite provision or base the award on loss of earning capacity due to the injury. It will have been noticed also that in some of these states, when the injury causes loss of several digits, the award is not based on partial loss of hand or foot but on the loss of each digit separately, aggregating the number of weeks for all fingers or toes into one award, which, of course, is limited to the scheduled amount payable for the total loss of hand or foot.

[1] *Stanczek* v. *Union Tanning Co.* Wisconsin. Industrial Commission. 6th Annual Report, p. 12.
[2] *Franko* v. *Shollhorn.* 104 Atlantic 485.
[3] *Spring Canyon Coal Co.* v. *Industrial Commission.* 193 Pacific 821.
[4] *Santora* v. *Raby.* New York Department of Labor. Special Bulletin, No. 81, p. 280.
[5] Alabama, Colorado, Connecticut, Delaware, Georgia, Idaho, Illinois, Indiana, Iowa, Maine, Maryland, Minnesota, Nebraska, New Jersey, New York, Nevada, Oregon, Tennessee, Vermont, Washington, West Virginia, Wisconsin, Wyoming.

XX

DISFIGUREMENT

Sometimes an injury to the head, face or hands may be of such a nature as permanently and seriously to disfigure a workman. Disfigurements may not reduce the earning capacity but they naturally affect the victim's ability to obtain employment, and for this reason statutory provision is made in certain states for compensation on account of disfigurement.

The workmen's compensation acts of eight states[1] require compensation for serious permanent disfigurement, while in the laws of three other states[2] the provision covers disfigurements which will impair future usefulness or occupational opportunities of the injured employee. The Wisconsin act provides for such disfigurement "as to occasion loss of wage"[3] and the statutes of Louisiana and Utah include with disfigurement the loss of bodily function.

The Supreme Court of New York,[4] in a case where the employee was seriously disfigured by scars and a flat nose as a result of the explosion of an emery wheel, interpreted the theory of the award in the following language:

> "One of the truths of life is that serious facial disfigurement has a tendency to impair the earning power of its victims. It would put him at a disadvantage when placed in competition with others and in some callings it would rule out entirely an applicant for employment. Facial or head disfigurement may leave one able to work but unable to get work."

This case, together with some other New York decisions, was appealed to the United States Supreme Court on the contention that compensation for disfigurement is not based on impairment of earning power and that the disfigurement clause of the New York act is arbitrary and oppressive and in contravention of the 14th Amendment of the Federal Constitution. The Supreme Court in sustaining the decisions of the lower courts, held[5] that impairment of earing power is not the sole ground of compensation; any physical impairment, whether it immediately

[1]Colorado, Illinois, Missouri, Nevada, New York, Ohio, Oklahoma, South Dakota.
[2]Indiana, Kentucky, Texas.
[3]Acts as amended 1919. Sec. 2394-9, Par. 5-f.
[4]*Sweeting* v. *American Knife Co.* 123 N. E. 82.
[5]*New York Central* v. *Bianc.* 40 Supreme Court 44.

affects the earning capacity or not, may be taken into consideration. The disfigurement clause is not unreasonable, arbitrary or contrary to the fundamental rights and does not exceed constitutional limitations upon state power.

The Wisconsin amendment to the act covering disfigurement was adopted after being presented to the legislature by the industrial commission with the following argument[1] in its support:

> "Facial disfigurement may be and sometimes is so serious as to cause a loss of wage independent of the physical disability, for two reasons: First, the disfigurement may be such as to make the employee repulsive and thereby lessen his chance of employment; and second, by reason of such disfigurement, the employee himself may become sensitive to his disfigurement and thereby lessen his ability to seek and obtain employment."

The Illinois commission[2] has taken a similar stand, and states in one of its decisions awarding compensation:

> "It is the judgment of the board that (1) to entitle one to compensation for disfigurement of face, hands, or head such disfigurement must be of such a character as to affect claimants earning capacity in that it makes him less aggressive and more timid, and (2) possibly subjects him to rejection when trying to obtain various kinds of work he may be fitted for."

In another Illinois case[3] compensation was awarded for disfigurement, although the employee continued to earn the same wages. An engineer received a severe gash over his right eye, and a compression of the region above the nose and between the eyes. In allowing compensation the board said:

> "It is true that he is an engineer and has been able to get as good wages since the injury as he got before but should he desire to follow another occupation the markings upon his face would seriously impair his ability to procure such employment."

The question has arisen whether one can receive compensation for disability in addition to disfigurement. The Illinois court[4] refused an award for disfigurement where permanent loss of earning power on account of the same injury had already been compensated. But where an employee received two injuries, one necessitating amputation of fingers and the other disfigurement

[1] *Ellingson* v. *White Machine Works.* Wisconsin. Industrial Commission. 3d Annual Report, p. 63.
[2] *Harpestad* v. *Alexander.* Illinois. Industrial Board. Bulletin No. 1, p. 14.
[3] *Meesis* v. *United Sanitary Dairy.* Illinois. Industrial Board. Bulletin No. 1, p. 78.
[4] *Smith Lohr Coal Co.* v. *Illinois Industrial Commission.* 126 N. E. 164.

of the face, he was entitled to compensation[1] for both disability and disfigurement.

The Wisconsin act provides 140 weeks' compensation for blindness of one eye and 160 weeks' for loss of an eye by enucleation. In a case where a sightless eye was injured so as to require enucleation, the commission[2] awarded the difference between the two schedules, or twenty weeks, interpreting the additional period of compensation for removal of eye to cover the disfigurement, holding that "a sightless eye is better than no eye at all and better than a glass eye." In Kentucky a workman in a stone quarry, having lost his eye by accident, made claim for disfigurement as well as for the loss of the eye. The Supreme Court[3] made the same award as in the Wisconsin case noted above, adding twenty weeks to the schedule covering loss of sight of the eye, the additional award being for disfigurement. It is interesting to note that the decision in this case was a reversal of the findings of the workmen's compensation board, which held:

> "the substitution of an artificial eye for a blind eye does not cause increased disfigurement which will impair the future usefulness or occupational opportunities of an employee engaged in the employment in which plaintiff was injured."

The Supreme Court not only took exception to the first part of the statement and awarded compensation for disfigurement but also held that disfigurement awards applied to "average cases but not to certain occupations."

An Illinois Supreme Court decision[4] held that the commission had no power to award compensation for disfigurement of a member and also for loss of use thereof. On the other hand, the Indiana board awarded compensation[5] for loss of eye and also for disfigurement of eyelid in an injury which burned the eyeball and lid.

Prior to the enactment of amendments to the compensation laws covering disfigurement, a remedy made use of in some states was an action for damages at common law. This was the decision in New York,[6] where a horse bit off a workman's ear. In Louisiana,[7] where an employee's hair was caught in machinery

[1] *Chicago Home for Friendless* v. *Illinois Industrial Commission.* 130 N. E. 756.
[2] *Hilmes* v. *Conroy.* Wisconsin. Industrial Commission. 7th Annual Report, p. 56.
[3] *Nelson* v. *Kentucky River Stone & Sand Co.* 206 S. W. 473.
[4] *International Coal Mining Co.* v. *Industrial Commission.* 127 N. E. 703.
[5] *Felker* v. *Seedman Foundry. Weekly Underwriter.* Vol. 93, No. 22, Nov. 27, 1915, p. 682.
[6] *Shimmick* v. *Clover Farms Co.* 169 App. Div. 236.
[7] *Boyer* v. *Crescent Paper Box Co.* 78 Southern 596.

and she was scalped, the court held that she was entitled to damages. The injury had not deprived her of earning power and in the absence of such loss there was no provision of the compensation law covering disfigurement.[1] The Oklahoma courts[2] have ruled to the contrary, in a case where damages were claimed for disfigurement, holding that the workmen's compensation act was the exclusive remedy to compensate for industrial accidents, although no provision in the law covered disfigurement.

The following are among the more interesting cases of disfigurement which have come before the courts and commissions.

In Michigan[3] an employee's ear was mangled by the bite of a horse belonging to his employer. An award was made on the ground that the injury was permanent and that hearing was affected.

Serious burning and discoloration of the face was compensated by the Illinois commission which said:[4]

> "It is immaterial whether this disfigurement appears on looking directly in the face or from the side; if it permanently and seriously marks, or mars, the features of the claimant it surely is such a permanent and serious disfigurement as is contemplated in act."

The New York Supreme Court[5] sustained an award for disfigurement to an employee who suffered an extensive laceration of scalp while operating an electric washing machine which caught her hair.

The New York Court[6] has also affirmed an award for disfigurement because of inability to wear a glass eye, and the New York board[7] has awarded compensation for disfigurement due to droop of an eyelid.

Where an employee was struck by a piece of emery wheel, permanently disfiguring his face and scalp, the Wisconsin commission held:[8]

> "his facial disfigurement will not in any wise interfere with

[1] An amendment of 1918 makes the provisions of the compensation law the exclusive remedy for industrial accidents. Act of 1918. Sec. 34.

[2] *Adams* v. *Iten Biscuit Co.* 162 Pacific 938.

[3] *Smith* v. *Walthers Department Store. Weekly Underwriter.* Vol. 91, No. 11, Sept. 12, 1914, p. 279.

[4] *Billman* v. *Two Rivers Coal Co.* Illinois. Industrial Board. Bulletin No. 1, p. 69.

[5] *Erickson* v. *Pruess.* 119 N. E. 555.

[6] *Rich* v. *Standard Textile Co.* Affirmed, 193 App. Div. 930. New York. Department of Labor. Special Bulletin No. 114, p. 47.

[7] *La France* v. *N. Y. Air Brake Co.* New York. Department of Labor. Special Bulletin No. 114, p. 47.

[8] *Ellingson* v. *White Machine Works.* Wisconsin. Industrial Commission. 3rd Annual Report, p. 63.

his obtaining employment and will not in any wise embarass him in associating with his fellow men. He has the honorable scars of industrial conflict, and while the same do not add to his attractiveness, at the same time they are not repulsive."

An employee received two small gashes near the top of his head. The Illinois commission[1] denied compensation for disfigurement, finding that unless his hair is very short the scars or marks would not disfigure and that injury was not such as to affect earning capacity.

In a Colorado case[2] an employee who was cut on the forehead agreed with his employer upon the amount of compensation. The commission disapproved of the agreement and dismissed the claim, holding that the disfigurement did not impair his earning capacity or his ability to seek further employment. But the same commission[3] awarded $100 compensation for disfigurement to a workman badly burned about the face.

In a California case an explosion of oil caused burns on the hands and face. The burns on the hands produced only a slight scar and burns on the face left the skin entirely smooth and normal, with the single exception of color, which was uniform although darker than before the injury. The California commission, in denying compensation, held:[4]

"the change in complexion was not of such nature or degree as to render applicant repulsive or to cause applicant any difficulty in obtaining or retaining employment."

In Illinois a claim for disfigurement for loss of a tooth, although the same had been replaced by a gold crown at the expense of the employer, was dismissed on the ground that there was no facial disfigurement.[5]

Where a horse, while being groomed, bit off the employee's nose, the New York board[6] awarded $2,500 compensation for the serious disfigurement from the injury.

In a Massachusetts case the employee, a girl of sixteen, wore her hair down. It caught in machinery, completely scalping her. In awarding compensation for disfigurement the Massachusetts

[1]*Golbach* v. *Burns Lumber Co.* Illinois. Industrial Board. Bulletin No. 1, p. 77.
[2]*Jones* v. *Sunnyside Gold Mining Co.* *Weekly Underwriter.* Vol. 93, No. 15, October 9, 1915, p. 478.
[3]*Leyden* v. *Western Chemical Mfg. Co.* *Weekly Underwriter.* Vol. 100, No. 24, June 14, 1919, p. 918.
[4]*Fowler* v. *San Joaquin Light & Power Corporation.* California. Industrial Accident Commission. Decisions. Vol. 8, p. 107.
[5]*Niemark* v. *West Coast Roofing Co.* Illinois. Industrial Board. Bulletin No. 1, p. 56.
[6]*Chase* v. *Aitken.* *Weekly Underwriter.* Vol. 100, No. 9, March 1, 1919, p. 324.

board held[1] that the fact she wore her hair down did not indicate negligence, not being a violation of any rule of employment which would have effected her discharge.

Compensation was awarded[2] in Colorado for disfigurement on account of loss of part of an ear.

In New Jersey an employee claimed compensation for facial disfigurement on account of scars between the eyebrows which marred his personal appearance and lessened his opportunity to secure work. The commissioner ruled[3] that incapacity for work includes inability to get work; there is incapacity for work when a man has a physical defect which makes his labor unsalable in any market reasonably accessible to him and there is a partial incapacity for work when such a defect makes his labor salable for less than it would otherwise command. Because the employee was a butler and the disfigurement in some cases would make his services less desirable, compensation was awarded.

Where an employee was struck across the nose, leaving his nose depressed and a scar on his cheek, an award of $500 for disfigurement was allowed by the South Dakota commissioner.[4]

[1]*Cardarelli* v. *Williams Shoe Co. Weekly Underwriter.* Vol. 101, No. 2, July 12, 1919, p. 71.

[2]*Mascone* v. *Colorado Fuel & Iron Co. Weekly Underwriter.* Vol. 94, No. 13, March 25, 1916, p. 362.

[3]*Dent* v. *Butterworth Judson Corporation. Weekly Underwriter.* Vol. 101, No. 4, July 28, 1919, p. 135.

[4]*Drake* v. *Elliot. Weekly Underwriter.* Vol. 100, No. 26, June 28, 1919. p. 992.

XXI

SECOND INJURIES

The award of compensation for second injuries to defective workers is considered differently under the various compensation laws. In some states the courts have been called upon to determine the degree of defect or incapacity resulting from a subsequent injury.

The legal provisions covering this question extend from one extreme of requiring compensation from the last employer for permanent total disability when such disability results from the last injury, to the other extreme of requiring the last employer to pay compensation only for the injury which the worker suffered while in his employ.

In ten states[1] compensation is based upon the second injury only, without reference to previous injury or disability. In six states[2] such compensation is based on the earning power of the worker at the time of second injury. The laws in five other states[3] provide that in cases where permanent total disability results from a second or subsequent injury, the last employer shall be liable for the second injury only, but the injured worker shall be entitled to compensation for permanent total disability, the amount needed to complete such payments coming from a special state fund created as follows: For every fatal injury in which there are no dependents, the employer pays into the state treasury a sum which varies in the different states. The sum of $100 is required in Minnesota; in New York, $500; in Ohio and Oregon, states with exclusive state funds, the amount is taken directly from the fund without special assessment; while in Utah, the amount paid in is $750, unless the employer is insured in the state fund; but in Wisconsin this fund is maintained by contributions of $150 from the employer in each case where an employee suffers a total loss or total loss of use of a hand, arm, foot, leg, or eye.

Under the Massachusetts law, when a workman already de-

[1]Delaware, Georgia, Indiana, Nebraska, New Mexico, North Dakota, South Dakota, Tennessee, Texas.
[2]California, Colorado, Maine, Michigan, Oklahoma, Rhode Island.
[3]Minnesota, New York, Oregon, Utah, Wisconsin.

fective receives a second injury causing permanent total disability, he shall receive full compensation for such disability, one-half of which is paid by the insurance company and the other half by the state. The payments made by the state are taken from a fund which is supported by $100 assessments for every case of personal injury resulting in death in which there are no dependents.

In Virginia a distinction is made between cases where two injuries are received in different employments, and cases where both are suffered in the same employment. In the former case, the last employer is liable for the second injury alone as if the previous injury had never occurred. However, when the employee is injured and later suffers a second injury under the same employer he is entitled to compensation for both injuries, payable consecutively. If the two injuries in the same employment result in total disability, compensation is payable for permanent total disability, but payments made for the previous injury are deducted from the total amount of compensation due.

When a previously injured employee sustains a subsequent injury and both injuries combine to produce permanent total disability, the laws of six states[1] award compensation for permanent total disability, but any compensation which the laws would allow for the first injury is deducted. In two states[2] compensation is awarded on the basis of incapacitation and disability resulting from the respective injuries. In three states[3] the employer is held liable for permanent total disability in all cases where second injuries produce this result, even though the first injury may have been sustained years before in other employment or may have been a congenital defect. In the laws of six states[4] no provision is made for the distribution of compensation costs in second injury cases.

The Alabama law[5] provides that the loss of a remaining eye, arm or leg entitles the injured worker to an award of three-fourths of the schedule allowance for permanent total disability less any payments made for the first disability; while the law in Illinois[6] states that

> "the compensation for each subsequent injury shall be apportioned according to the proportion of incapacity and disability caused by the respective injuries which he may have suffered."

[1]Kansas, Kentucky, Maryland, Montana, Nevada, Wyoming.
[2]Illinois, Iowa.
[3]Idaho, Vermont and Washington.
[4]Arizona, Connecticut, Louisiana, New Hampshire, Pennsylvania, West Virginia.
[5]Acts of 1919. Part 2, Sec. 13, Par. e-1½.
[6]Acts of 1913 amended 1919, Sec. 10. Par. (h).

The Supreme Court of Illinois held[1] that the result of a second injury to a one-armed watchman for a railroad company was a permanent total disability chargeable to the employer. The reasoning in this case was to the effect that the watchman was known to be defective when employed, and for that reason was given a lower wage than he otherwise could have secured. The court said:

> "He was employed to do work which could be performed by a man having but one arm, and he was paid upon that basis. By the loss of his leg such capacity as he had for work was entirely destroyed, and under the provisions of the act he was entitled to compensation for total permanent disability. Such a construction of the act works no hardship upon the plaintiff in error. [The claimant] was employed and paid as a man of limited capacity and the compensation which the plaintiff in error is required to pay is based upon the wages it was paying him as a man of limited capacity."

In a more recent case,[2] however, the same court held that where a man had lost the vision of an eye previous to securing employment and then suffered an accident causing the loss of a hand he was not entitled to compensation for permanent total disability. In distinguishing this case from the reasoning in the Wabash Railway Co. case, *supra*, the court held that although the man had lost the vision of one eye prior to securing his last position, the loss of vision was not apparent to his employer and his earning capacity was not decreased thereby. In this case the employee was a press foreman for a newspaper in charge of a press and five men who operated it, his job requiring brain work rather than physical labor. The loss of the eye had occurred under a different employer, but in his present employment he had been paid as if he had normal eyesight, and even after the second accident, the loss of a hand, there was no reduction in his earning capacity; in fact his wages had been increased. The commission awarded compensation for permanent total disability but the Supreme Court ruled that the award be based on loss of hand as per the specific allowance under the schedule, regardless of the loss of earning power, because the statute so provides. Continuing in the words of the court:

> "But [the employee] is not entitled to compensation for the loss of his hand upon the theory that he is permanently and totally incapacitated for work, which is not the fact, although he had only one eye when he lost his hand. This is so because the injury received while so employed did not occasion total disability as a matter of fact. An employer

[1] *Wabash Railway Co.* v. *Industrial Commission.* 121 N. E. 569.
[2] *Chicago Journal* v. *Industrial Commission.* 305 Illinois 46.

> cannot be required to pay for total disability for the loss of a hand unless such loss of a hand does occasion total disability or incapacity to work as already explained. If [the employee] had lost both the eye and the hand while working for plaintiff in error then under the statute he would be entitled to compensation awarded him because the statute provides that the loss of a hand and an eye as a result of an injury arising out of and in the course of his employment entitles him to compensation for total permanent disability; but when the injury results only in the loss of one hand or one eye during the employment, the employer cannot be required, under the act, to pay compensation for total disability under any circumstances unless the injury destroys the employee's total capacity as an actual fact and without regard to the fact that he may have lost an eye or a hand or a limb previous to his employment."

The evolution of the present New York statutory provision in regard to second injuries is interesting and begins with the case of *Schwab* v. *Emporium Forestry Co.*[1] Here a workman had his right hand severed at the wrist, and, having lost his left hand about twenty years before, was awarded compensation for total permanent disability. The reasoning expressed in this case was that the workman lost the entire earning capacity of a one-handed man and he should be compensated accordingly, it being presumed that he was earning less wages than a man with two hands.

Soon after this decision had been handed down, the New York legislature amended the law by providing[2]

> "that an employee who is suffering from a previous disability shall not receive compensation for a later injury in excess of the compensation allowed for such injury when considered by itself and not in conjunction with the previous disability."

The legislature had in mind that it would be difficult for crippled persons to obtain employment and retain it if the court ruling in the Schwab case, *supra*, was followed.

The New York legislature, not satisfied with this regulation when applied to injuries totally incapacitating the employee from work, in that the award for the last injury was inadequate, a year later amended the law[3] so as to pension the employee for the remainder of his life after the cessation of payment by employer or insurer during the prescribed period. This pension comes from a special fund, contributed to by fines and also by an assessment on an employer for $500 in each case of acci-

[1] *Schwab* v. *Emporium Forestry Co.* 167 App. Div. 614.
[2] Laws of 1915; Chap. 615; Sec. 15, Subd. 6. (renumbered Subd. 7 in 1922).
[3] Laws of 1916; Chap. 622; Sec. 15, Subd. 7 and 8. (renumbered Subd. 8 and 9 in 1922).

dental death to a workman who leaves no dependents to claim compensation. The object of this new plan was to afford greater justice to the workman without penalizing the employer. It must be noted, however, that this pension fund applies only where the second injury results in total permanent disability and does not cover a workman partially disabled.

Where the second injury results in partial disability only, the states have different measures of disability attributable to the last injury. Thus in Michigan[1] an employee had his third finger cut off by a ripsaw. Several years before he had lost the greater part of the other fingers of the same hand. Although by the accident his hand was rendered useless the court held that the injury must be treated as the loss of the third finger and not the loss of the hand.

A contrary decision was handed down in an Illinois case[2] where an employee who had previously lost a finger, as result of a later injury lost the use of the entire hand. The fact that he might have recovered from the first injury did not reduce the amount of compensation to which he was entitled for the loss of the hand. The court stated:

> "The fact that his hand was not perfect did not render the loss any the less complete."

In Oklahoma[3] we find another method of computing the award. Here the claimant who had lost his foot thirty years before, sustained an injury to the knee of the same leg which made the leg useless. On the reasoning that compensation could not be paid for a foot which had been lost previously, the award was based on the difference between the statutory allowance for loss of leg and for loss of foot.

The same ruling was made by the Kentucky board[4] where a fracture of the elbow resulted in 50% impairment of the use of an arm, of which three fingers of the hand had previously been lost. The award was for 50% of the compensable value of the arm less the compensable value of the three missing fingers. The Kentucky ruling was in conformity with the workmen's compensation act which provides that the employer shall be liable for the resultant condition from a second injury less the

[1] *Winn* v. *Adjustable Table Co.* 159 N. W. 372.
[2] *Mark Mfg. Co.* v. *Industrial Commission.* 122 N. E. 84.
[3] *Stewart* v. *Southern Oil Co.* Oklahoma. Industrial Commission Reports. Vol. 2, p. 32.
[4] *Narrell* v. *American Bridge Co.* Kentucky. Workmen's Compensation Board. Leading Decisions. 1st Report, p. 41.

compensation which the law would have afforded on account of the first injuries had they been compensated thereunder.

An unusual case developed in Pennsylvania.[1] During boyhood the employee had his hand amputated at knuckle joints. This injury would ordinarily be compensated for as the loss of the hand. However, he acquired great skill with his mutilated member until by another accident he lost the entire palm of the hand. There could be no loss of hand because he had no hand to lose. The commission, however, found the injury affected his ability to earn wages and to that extent awarded compensation.

[1] *Wills* v. *Altoona Coal & Coke Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 73.

XXII

AUTOPSY

Although the various compensation boards are generally clothed with the necessary powers to administer the compensation acts, settle disputes and make or deny awards, the question of their authority to order autopsies is not definitely answered in all states.

Only nine states[1] make statutory mention of this subject. Under the laws of three of these states,[2] when the cause of death is obscure and in dispute, any interested party may require an autopsy and the expense is borne by the party demanding same. In three other states[3] both the employer and the commission have the right in case of death to require an autopsy, while in Minnesota any interested party may request an autopsy and if denied, the commission may, upon petition, order it to be made.

The California law gives the commission the right to require an autopsy and if the dependents refuse to allow such examination, it gives rise to the disputable presumption that death was not due to causes entitling claimants to benefits.

Under the Wisconsin act, the commission may in its discretion withhold its findings in a disputed case until an autopsy is held in accordance with its directions. The law also prescribes certain conditions which must be observed to make the findings of a post mortem examination admissible as evidence. The party offering such testimony must have given the opposing party an opportunity to attend the autopsy. When the post mortem is performed by a coroner, in order that the results of such examination be admitted as testimony, the autopsy must have been performed for a purpose expressly authorized by statute.

Reports from various commissioners advise that autopsies are not required in North Dakota, West Virginia or Vermont, or in New York and Utah, but in these two latter states the examination is usually arranged between the parties interested.

[1]Alabama, California, Georgia, Indiana, Minnesota, Nebraska, Tennessee, Virginia, Wisconsin.

[2]Alabama, Nebraska, Tennessee.

[3]Georgia, Indiana, Virginia.

In New Jersey and Oklahoma the commission has no jurisdiction to order autopsies and in Pennsylvania, Ohio and South Dakota it is reported that autopsies are not held without the consent of the immediate relatives. The Oregon act does not require autopsies but they may be had upon request of the commission. Seven states[1] report that post mortem examinations are permitted. In Montana, Nevada and Washington autopsies are held only if necessary to establish the cause of death.

[1]Idaho, Iowa, Louisiana, Maine, Massachusetts, Kentucky, Michigan.

XXIII

DISEASE THE RESULT OF ACCIDENT*

Appendicitis

Workmen's compensation experience shows that a blow or strain in the region of the vermiform appendix has been compensated as an aggravation of a chronic infection of the appendix or a rupture of an appendix in a diseased condition, but cases in which it has been claimed that the injury caused the disease in a healthy appendix are uncommon. Thus in New York[1] an employee suffered a severe strain and received medical attention for nearly a month when the doctor diagnosed the case as appendicitis. It was held that the chronically diseased condition of the appendix was "lighted up" by the accident. In Connecticut, an employee lifting heavy stones suffered pain from his exertion and when operated upon the next day for appendicitis the doctors found that peritonitis had set in. The Connecticut commissioner, 2nd District,[2] found that the strain was the proximate cause of the rupture of the appendix. The fact that the appendix may have been diseased at the time of the accident did not invalidate the claim, as it was held to be evident that if the strain had not occurred there would not have been the fatal result.

That appendicitis is the result of accident is often difficult to prove. This was the opinion of the Idaho commission.[3] In denying compensation it said:

> "It seems to be, not only the consensus of opinion of the best expert authority obtainable that there is a remote possibility that while appendicitis may be produced by a strain due to lifting or other similar strain, there seems to be no conflict in such opinion that the same is not a probability and rarely, if ever, occurs. All of such opinion and authority seem to agree that the appendicitis complained of in this case was due to other causes and conditions rather than to the accident complained of."

*Some of the conditions discussed in this chapter are not distinct disease entities, but have been considered as diseases by various boards and commissions.

[1]*Reid* v. *Summit Foundry Co. Weekly Underwriter.* Vol. 105, No. 3, July 16, 1921, p. 130.

[2]*Emil Hennequin* v. *Town of Columbia. Weekly Underwriter.* Vol. 91, No. 12, Sept. 19, 1914, p. 351.

[3]Ralph Crabb Case No. 2186. Idaho. Industrial Accident Board. 2nd Report, p. 61.

A California case[1] follows the same line of reasoning. The employee suffered a strain in heavy lifting and felt a severe abdominal pain. Six days after the accident he died and a post mortem revealed that peritonitis from a ruptured gangrenous appendix caused the death. The causal connection between the strain and death was not established, as the preponderance of expert testimony was to the effect that the attack of appendicitis "followed the strain merely as a matter of coincidence." Likewise in Connecticut[2] an employee who had an attack of appendicitis and was operated upon, claimed his disability was the result of his employment, which required him to drive a motor truck over rough roads and to work at all hours, leaving irregular periods for eating and sleeping, until he became physically exhausted and experienced pain in the abdomen. In this case the Connecticut commissioner, 3rd District, held that it was merely a matter of conjecture to link the disease up with the effects of the motor trip, and compensation was disallowed. The New York board[3] denied compensation to a workman who was operated upon for "acute perforated appendicitis" nine months after an accident, the disease after that length of time being held not related to the injury previously sustained.

In Massachusetts[4] appendicitis has been compensable as a result of a fall in which the employee struck his right side in the region of the appendix, but a claim for death resulting several months later from pneumonia and endocarditis alleged to be due to septic poisoning following the appendicitis was not allowed.

A New York case[5] also allowed compensation where a pre-existing case of appendicitis was aggravated by a blow in the stomach. Also in Wisconsin[6] disability resulting from appendicitis was compensated when a blacksmith had received a severe strain while shoeing a horse. In the same state compensation was also granted[7] where the appendicitis followed a severe

[1] *Murphy* v. *South West Shipbuilding Co.* California. Industrial Accident Commission. Decisions. Vol. 7, p. 114.

[2] *Brounstein* v. *Connecticut Fruit & Produce Co. Weekly Underwriter.* Vol. 103, No 21, November 20, 1920, p. 842.

[3] *Vezza* v. *Peirce Bros.* New York. Department of Labor. Special Bulletin No. 97, p. 172.

[4] *Wadger* v. *Stevens Mfg. Co.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 4, p. 111.

[5] *Edwards* v. *Red Cross.* New York. Department of Labor. Special Bulletin No. 97, p. 172.

[6] *Zimmerman* v. *Gaulke.* Wisconsin. Industrial Commission. 7th Annual Report, p. 49.

[7] *Tuller* v. *Besley Mfg. Co.* Wisconsin. Industrial Commission. 6th Annual Report p. 61.

blow in the abdomen. In both of the Wisconsin cases cited above the employers contended that appendicitis is not caused by trauma. Nevertheless, the commission held that in cases like this, where the appendicitis follows in the natural sequence after an injury, it is only fair to presume that it is the result of the injury, considering the fact that the surgeons who performed the operations supported this theory.

A Connecticut commissioner[1] awarded compensation covering appendicitis aggravated by strain in lifting a heavy basket, holding that a normal appendix would not be affected by the strain but the infected appendix of the employee, which he considered normal, was brought into an abnormal condition by the strain.

Anthrax

Anthrax, like typhoid fever and tuberculosis, is due to a definitely known cause, the anthrax bacillus, a microscopic unicellular vegetable organism which gains entrance to the body through some break in the skin. It is usually found in the hides and hair of animals used in tanning, brush making, etc. Frequently it has been contracted from using shaving brushes made from infected hair. In handling hides and hair workers may be brought into contact with the organism. In certain of the states awards for compensation have been made for the disease occurring among such workers.

The New York courts have held[2] that such disability was a personal injury by accident. In another case[3] the same court held that the anthrax arose out of and in the course of employment, although it might have gained entrance through a slight razor cut received in a public barber shop. But the fact that the employee the next day handled hides in a tannery influenced the court in affirming the award of the commission, which found

> "that the contracting of anthrax, consisting of the bite of the bacillus of anthrax, was an accidental injury within the meaning of the Workmen's Compensation Law, and that said injury arose out of and in the course of his employment."

Subsequent to these court decisions the workmen's compensation law was amended to include occupational diseases, anthrax being one of the diseases specified.

[1] *Morrin* v. *Waterbury Wet Wash Co.* Connecticut. Compensation Decisions. Vol. 3, p. 274.
[2] *Hiers* v. *Hull & Co.* 178 App. Div. 350.
[3] *Eldridge* v. *Endicott-Johnson Co.* 189 App. Div. 53.

In awarding compensation for a death from anthrax the Wisconsin commission said:[1]

> "Under the evidence submitted in this case, it is apparent to us that [the claimant] while in the course of his work accidentally came in contact with an anthrax germ which entered his body at a point on his neck. The entrance of the germ was an accident and to our minds is an accidental injury which caused his death. It seems immaterial how the germ enters the body. The entrance of the germ is the accident and whether it was forced in by a blow or a tool or implement used in the work is immaterial. The entrance of the germ is the accident and constituted an accidental injury as the term 'accidentally injured' is used in the Workmen's Compensation Law."

Upon appeal to the circuit court the above decision was affirmed.

A case came before the Illinois Supreme Court[2] in which judicial notice was taken of the probable presence of anthrax germs with the presumption that a man working about hides might receive an anthrax germ through an open sore. In the words of the decision,

> "It is a reasonable conclusion from the evidence that the anthrax bacillus came in contact with the abrasion on [the claimant's] neck, caused by his scratching off the pimple on Saturday morning. Nobody saw the anthrax bacilli enter his system. In the nature of things the entrance of the microscopic organism was not perceptible, but the broken skin was there, the swelling followed, the characteristic malignant pustule developed, the rapid destruction of tissue occurred, the anthrax bacillus was present, and the speedy death resulted. This sequence of events is scarcely susceptible of any explanation except the acquiring of the anthrax bacillus from the hides in plaintiff in error's tannery."

The Pennsylvania Supreme Court held[3] that compensation should be awarded for the death of a wool sorter as the result of infection with anthrax germs through a scratch on his neck. The employer's contention in this case was that there had been no accident and that death was caused by disease alone, which was not compensable under the act. Upon proof being submitted that the deceased worker suffered a scratch on his neck, anthrax later developing at the site of injury, the court affirmed the award for compensation, saying in part:

> "When, however, death results from germ infection, to bring a case of this character within the Act of 1915, *supra*, the disease in question must be a sudden development from

[1] *Tessmer* v. *Trostel & Sons*. Wisconsin. Industrial Commission Decisions. 8th Annual Report, p. 67.

[2] *Chicago Rawhide Mfg. Co.* v. *Industrial Commission*. 126 N. E. 616.

[3] *McCauley* v. *Imperial Woolen Co., et al.* 261 Pa. 312.

some such abrupt violence to the physical structure of the body as already indicated, and not the mere result of gradual development from long continued exposure to natural danger incident to the employment of the deceased person, as in cases of occupational diseases, the risks of which are voluntarily assumed.

"Here the anthrax germ, a distinquishable entity, came into actual contact with the deceased, thus gaining an entrance into his body, and his neck began to swell and discolor; therefore the complaint from which the claimant died can be traced to a certain time when there was a sudden or violent change in the condition of the physical structure of his body, just as though a serpent, concealed in the material upon which he was working, had unexpectedly and suddenly bitten him."

The Pennsylvania board held[1] in another case that, inasmuch as the language of their act expressly stated that injury and personal injury meant violence to the physical structure of the body and such disease or infection as naturally resulted therefrom, any disability resulting from germ infection which might have entered the body when no cut or wound was disclosed, did not fall within the provisions of the act. In this opinion the commission said:

"This language [of the act] excludes the allowance to an employee of compensation on account of disease whether by germ infection or otherwise, unless such disease naturally results or develops from violence to the physical structure of the body of the employee sustained by him in the course of his employment.

"It is a well recognized medical fact that anthrax is a germ disease of highly infectious nature, but as it is agreed that the disease in this case did not result from any violence to the physical structure of the body of the claimant, sustained by him in the course of his employment, any disability caused is not the subject of compensation under the Act and the claim is disallowed."

Erysipelas

Erysipelas, a germ disease, like anthrax, develops through some cut or abrasion of the skin. When the break in the skin occurs in the course of employment and the erysipelas germ enters, it has been held a compensable disease because the break in the skin is the proximate cause of the disability. Thus in Indiana[2] an employee sustained a wound through which erysipelas gained entrance. The infection spread, pneumonia developed and death resulted. Compensation was allowed

[1] *Sawisky* v. *Robert H. Foerderer, Inc.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 27.

[2] *Fort Wayne Roller Mill* v. *Buanna.* 122 N. E. 362.

the dependents on the theory that death was due to the injury. A parallel case occurred in New York.[1]

An interesting erysipelas case in Connecticut[2] illustrates the serious and unexpected results of a slight injury. The employee sprained his finger while lifting a cake of ice, and in treating his injury he used a liniment which caused an abrasion of the skin. Through this port of entry erysipelas infection became active, with resultant death. It was held that the chain of causation was not broken and that death was the proximate result of the sprain.

In another Connecticut[3] case the finding shows that the unusual exposure of the claimant to the weather caused frost-bite which produced lesions on the face through which the germs of erysipelas entered. The court, in sustaining the compensation award, said:

> "If the primary injury arises out of the employment every consequence which flows from it likewise arises out of the employment."

That the entry of the germ itself is not a compensable injury is shown in an Oklahoma case.[4] Here a surveyor wore boots which irritated and blistered his heel. The injury was held not to be an accident and no compensation was allowed for the subsequent disability caused by erysipelas infection.

In Pennsylvania a workman was cut on the left temple; the erysipelas germ gaining entrance at this point caused death. The Pennsylvania board[5] held that death was the natural result of the accidental injury and granted death benefits to the widow.

Loss of Hearing

Deafness in one or both ears is specifically compensated in many of the workman's compensation acts, the time varying from 25 weeks to 36 months for deafness in one ear and 100 weeks to 96 months for total deafness as shown in the table below. Where the statutes make no provision the commissions have held that deafness is an impairment which will affect the workman's general usefulness and decrease his earning power and also subject him to dangers where hearing aids a man in

[1] *Wand* v. *Jamestown Brewing Co.* 180 N. Y. Supp. 694.
[2] *King* v. *City Ice & Coal Co.* Connecticut. Compensation Decisions. Vol. 2, p. 168.
[3] *Larke* v. *John Hancock Mutual Life Insurance Co.* 97 Atlantic 320.
[4] *Terry* v. *Wolverine Oil Co. Weekly Underwriter.* Vol. 94, No. 20, May 12, 1916, p. 572.
[5] *White* v. *White.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 2, p. 257.

protecting himself against impending violent contact. In an Iowa case[1] in which the employee lost the hearing in his left ear, compensation was awarded because his inability to understand directions given by those with whom he worked precluded his employment in certain lines of work. The theory of compensation for loss of hearing therefore rests upon the theory of all compensation in the workmen's compensation acts, viz., loss of earning capacity. Thus the reason for awarding compensation in Nebraska[2] on account of loss of hearing was that the employee became less fitted to pass physical examinations and might, therefore, be barred from desirable positions.

In Idaho,[3] before the enactment of the amendment covering deafness, which provides compensation for 35 weeks for one ear and 115 weeks for both ears, the board in arriving at the amount of compensation for total deafness found the laws of other states compensated equally for loss of hand at the wrist and for deafness and they accordingly allowed 150 weeks compensation for total deafness. The deafness in this case was the result of a toxic condition caused by fracture of a leg. In Oklahoma where the act allows not more than $3,000 for loss of hearing, the Supreme Court[4] has sustained an award of $1,500 for loss of hearing in the left ear. In answer to the question of amount of compensation to be allowed under the Pennsylvania law, which does not specify loss of hearing in its schedule, the board[5] awarded compensation based upon loss of earning power, which was estimated at 15% permanent partial disability because of loss of hearing in one ear.

An interesting case in New York[6] involves the partial loss of hearing in a tester of dictographs. The claimant contended that his deafness was due to continuous use of his ears in connection with his work. The board found such to have been the fact and awarded compensation. This award was reversed by the Supreme Court because, by neglecting to produce the proper legal evidence, no causal relation was established between the work performed by the claimant and his injury. "It may

[1] *Brickley* v. *Sheets Co.* Iowa. Workmen's Compensation Service. 4th Biennial Report. p. 150.

[2] *Stoica* v. *Swift & Co.* 160 N. W. 964.

[3] *McKay* v. *Bunker Hill Sullivan Mining Co.* Idaho. Industrial Accident Board. 2nd Report, p. 79.

[4] *Missouri Valley Bridge Co.* v. *State Industrial Commission.* 207 Pacific 562.

[5] *Barnett* v. *Brashear & Cahill. Weekly Underwriter.* Vol. 106, No. 17, April 29, 1922, p. 896.

[6] *Ferst* v. *Dictograph Products Corp.* 193 App. Div. 564.

have resulted from natural causes entirely independent of his work."

TABLE 11: SCHEDULES FOR LOSS OF HEARING UNDER WORKMEN'S COMPENSATION LAWS

(National Industrial Conference Board)

State	Per cent of wages paid	Number of weeks compensation is paid	
		One ear	Both ears
Alabama	50	..	150
Colorado	50	35	139
Connecticut	..	52	156
Georgia	50	..	150
Idaho	55	35	115
Indiana	55	..	100
Iowa	60	50	150
Kansas	50	25	100
Maryland	66⅔	50	100
Minnesota	66⅔	52	156
Montana	50	..	120
Nebraska	66⅔	50	100
Nevada	50	20 mo.	60 mo.
New Jersey	66⅔	40	160
New Mexico	50	35	135
Oregon	$25 mo.	36 mo.	96 mo.
Tennessee	50	..	150
Texas	60	..	150
Vermont	50	42½	170
Washington	Lump sum	$500	$1900
Wisconsin	65	40	160

Influenza

Like typhoid fever, tuberculosis, pneumonia and other infectious diseases, influenza is a disease that bears only a peculiar and casual relation to occupation. Many of the cases that have come before the commissions and courts for settlement have shown that the influenza was a secondary result of the injury, although in a few instances compensation has been claimed and awarded for influenza contracted directly from the occupation. Such cases as these follow in the wake of epidemics of the disease, and usually relate to persons who have had more than the usual exposure to which the general public is subjected.

Among the leading decisions and rulings on this question we find the following:

In a Pennsylvania case[1] an employee suffered heart strain from heavy work and thereafter contracted influenza which caused his death. Compensation was denied because, although

[1] *Gerhardt* v. *Seifert*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 376.

his death was due to influenza which was epidemic at the time, there was no connection between the strain and the disease from which he died. Similarly in Colorado a patrolman claimed that he contracted influenza as a result of overexertion, but the commission held[1] that under such circumstances his condition was not the result of an accident and refused an award because of his disability. In California[2] compensation was refused to a visiting nurse who claimed that influenza was due to her employment; it was shown that she did not come in contact with influenza cases in her work and her exposure was the same as that of the community at large, since there was an epidemic at the time.

However, where the employee is engaged in the care of influenza patients and contracts the disease it has been held an injury arising out of the employment. In the case of death of a hospital interne in constant attendance upon influenza patients, it was held[3] that his danger was in excess of the usual risk to the community. In another California case,[4] the employer contended that the employee contracted the disease by general exposure in common with the rest of the community, but the facts were established that the deceased was employed as a safety engineer at a mine at the time of an influenza epidemic and at the request of the mine superintendent he gave up his regular duties and devoted his time to caring for patients. The Supreme Court of California, in sustaining the award, held that the risk in his later position was more dangerous than that of the public in general and the natural inference was that he contracted the disease in the course of his employment.

Where a steward in a hospital was exposed to a large number of influenza cases during an epidemic, it was contended that contraction of the disease in the course of his employment was a matter of conjecture and speculation, but because of the fact that his exposure was considerably greater than that of the public, the Supreme Court of California held[5] that the commission was justified in concluding that the deceased's illness was due to the particular exposure of his employment. In the words of the court,

[1]*Neill* v. *City & County of Denver*. *Weekly Underwriter*. Vol. 101, No. 11, Sept. 13, 1919, p. 414.
[2]*Frisbee* v. *University of California*. California. Industrial Accident Commission. Decisions. Vol. 6, p. 77.
[3]*Schwartz* v. *County of Fresno*. California. Industrial Accident Commission. Decisions. Vol. 6, p. 132.
[4]*Engels Copper Mining Co.* v. *Industrial Accident Commission*. 192 Pacific 845.
[5]*City and County of San Francisco* v. *Industrial Commission*. 191 Pacific 26.

> "This conclusion is the more justified by the fact that it coincides with the conclusions of most of the physicians who testified. Their opinions on a point of this character are entitled to consideration, since it is a part of their vocation to observe diseases and how they spread and to draw conclusions from their observation."

An employee handling supplies returned from various emergency hospitals established throughout Pennsylvania during the influenza epidemic, died of influenza and claim for compensation was made by his dependents. The board in denying the award held[1] that influenza "was contracted by all sorts of people in all sorts of occupations" and that in this case

> "it can be known with no degree of certainty when or where influenza is contracted and unless the claimant can show disease was contracted in the course of the employment she is not entitled to compensation."

The Pennsylvania board has held, as a general rule, that illness following accident is not compensable. However in a case[2] where an employee died three days after receiving a severe injury to his head and chest due to a fall from a scaffold to the steel deck of a ship, compensation for death from influenza was awarded to his dependents. The award was based (1) on the fact that shortly after the injury the employee's temperature rose to 100° or 100 1/5° and (2) that a post mortem examination revealed edema, congestion of the left lung and a fat and flabby heart. From medical testimony the board decided that at the time of the injury the employee was suffering from influenza in the incipient stage and that his disease was aggravated and the fatal termination hastened by means of the accident.

On the contention that an accident has lowered the employee's vitality and lessened his resistance to influenza many claims for compensation have been made. In New York[3] an award was made where an employee was convalescing in a hospital and contracted influenza as a result of lowered vitality occasioned by the accident. However, in Pennsylvania,[4] while the employee was recovering from a fractured leg and became ill and died from influenza, the board found no causal connection between the accident and death. Compensation was also

[1] *Pleam* v. *Commonwealth of Pennsylvania*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 156.

[2] *Rodgers* v. *Sun Shipbuilding Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 97.

[3] *Kahl* v. *City of New York*. *Weekly Underwriter*. Vol. 101, No. 26, Dec. 27, 1919, p. 945.

[4] *Miller* v. *Hanna & Sons*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 428.

denied by the Kentucky board[1] where the above facts were identical. It was held that the weakened condition of the deceased was not the predisposing cause of influenza, inasmuch as there was an epidemic at the time.

Mental Disturbance

Insanity resulting from mental shock has been compensated by the California Industrial Accident Commission.[2] In the course of its decision the commission said:

> "The possibility of being brought face to face with some gruesome and shocking injury to a fellow workman, involving nervous strain to the onlooker is the risk of any employment. Such nervous shock therefore arises out of and is incidental to the employment and should be compensated, for it directly causes injury."

A parallel case was awarded compensation in Michigan.[3] Here the employee accidentally dropped a radiator through an opening in the second floor and it fell on a man below. The employee presumed the man had been killed and the shock was so great as to keep the employee in a highly nervous state, so that he became delirious and died.

Where an employee's mind became unbalanced as a result of infection in his injured hand and during the night ran out of the hospital, later being found dead on the railroad track, it was the opinion of the Illinois commission[4] that there was sufficient connection between the injury and death to hold that death was the direct result of the accident. The New York Board has made a similar ruling.[5]

A comparable case arose in Pennsylvania.[6] An employee received an electric shock and was thrown violently thereby breaking a rib. As a result of pleurisy which developed from the broken rib he became delirious and committed suicide. It was held that

> "deceased killed himself while possessed of an uncontrollable insane impulse or while in a delirium or frenzy without rational consequences of his act."

His widow was compensated on the theory that his act was

[1] *Lambert* v. *Consolidation Coal Co.* Kentucky. Workmen's Compensation Board. Leading Decisions. 3rd Report, p. 78.
[2] *Reich* v. *City of Imperial.* California. Industrial Accident Commission. Decisions. Vol. 1, p. 337.
[3] *Klein* v. *Darling.* 187 N. W. 400.
[4] *Chiesa* v. *U. S. Crushed Stone.* Illinois. Industrial Board. Bulletin No. 1, p. 82.
[5] *Hayden* v. *McLaren Co.* New York. Departent of Labor. Special Bulletin No. 97, p. 177.
[6] *Lupfer* v. *Baldwin Locomotive Works.* 112 Atlantic 458.

unintentional, due to delirium and a direct result of the accidental electric shock.

The same question arose in a Massachusetts case.[1] An employee suffered total loss of vision in one eye. Nearly a month later, in a fit of insanity he threw himself from the window of the hospital, where he was being treated, and died from the fall. The contention of the employer that the employee contemplated suicide and that death was the result of a deliberate act was not sustained; the court, in affirming an award to the widow, held that the suicide was the result of an irresistible impulse produced by a mental derangement which was caused by the accident.

Compensation was allowed in Idaho[2] for nervous shock due to an accident in which a miner was caught in a cave-in and not rescued until fourteen days later. Nervous shock due to the explosion of a shell in a munitions factory was held[3] to be a personal injury under the Connecticut workmen's compensation act to the same extent as if there had been a direct physical injury.

An employee suffered an injury to his foot and later his employer filed application to be relieved of further compensation on the ground that the injury had healed and that the employee was now suffering from hysterical neurosis. The Michigan commission held[4] in this case that the hysterical condition was a result of the accident and as it still caused partial disability, compensation was continued. A similar question was passed upon by the Supreme Judicial Court of Massachusetts[5] in which the opinion reads in part:

> "The physical injury to the eye of the employee in the case at bar was slight and he soon recovered from it completely so far as concerned the harm to the organ itself. But the Committee of Arbitration found that the injury to the eye caused a nervous upset and a neurotic condition which is purely functional. The Board found that he was 'partially incapacitated from work by reason of a condition of hysterical blindness and neurosis, said condition having a causal relation to the personal injury.' These findings which seem to be identical in substance, were warranted by the evidence."

Resembling this Massachusetts decision is a Connecticut

[1] *In re Sponatski.* 220 Mass. 526.
[2] P. B. Grant's Case No. 8529. Idaho. Industrial Accident Board. 2d Report, p. 66.
[3] *Gagham* v. *Scovill Mfg. Co. Weekly Underwriter.* Vol. 101, No. 1, July 5, 1919, p. 30.
[4] *Lisner* v. *Consumers Ice Co.* Michigan. Industrial Accident Board. Workmen's Compensation Cases. July, 1916. p. 61.
[5] *In re Hunnewell.* 107 N. E. 934.

case[1] where an employee sprained his wrist and thumb, and, being a receptive subject, developed traumatic neurosis. The employer moved that the claim be dismissed on the ground that the present incapacity was not due to the injury. The motion was denied and the employee was directed to take institutional treatment. Likewise in Idaho[2] an employee, whose recovery from a dislocated hip was delayed on account of traumatic neurosis, was awarded compensation until he was able to resume his work.

The New York Supreme Court held[3] a similar opinion where a workman sustained an injury to his right eye, necessitating enucleation, and, due to traumatic neurosis or hysterical blindness, the sight of the left eye became affected and was almost wholly lost. Quoting from the opinion,

> "If an injury requires an operation and the operation deranges the mind or nerves, clearly disabilities resulting from the derangement result from the injury."

A case came before the New York board in which an employee fractured a finger and as a result suffered ankylosis and enlargement of the middle phalangeal joint. The injury aggravated her high strung nervous temperament and because of her neurotic condition she became incapacitated from work for six months. Compensation was awarded[4] because the accident was responsible for the traumatic neurosis. But in a Pennsylvania case[5] where the employee lost his thumb and index finger and later committed suicide, there was no evidence to support the contention that the insanity and injury were related, and compensation was therefore denied.

Compensation was continued in a New Jersey case,[6] although the employee had recovered from the physical injuries as a result of falling into an ash pit, because medical testimony showed he was still suffering "from mental, nervous and emotional disability" which had a definite effect upon his earning capacity.

Pain and headaches as the result of accident, in order to be

[1] *McKennett* v. *Underwood Typewriter Co. Weekly Underwriter.* Vol. 102, No. 5, Jan. 31, 1920, p. 209.
[2] I. L. Fisher's Case No. 7140. Idaho. Industrial Accident Board. 2d Report, p. 68.
[3] *Weber* v. *Haiss Mfg. Co.* 181 N. Y. Supp. 140.
[4] *Holton* v. *Harrower. Weekly Underwriter.* Vol. 105, No. 8, August 20, 1921, p. 324.
[5] *Schneider* v. *Rech-Marbaker Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 360.
[6] *Kowalski* v. *Public Service Electric Co. Weekly Underwriter.* Vol. 103, No. 23, Dec. 4, 1920, p. 915.

compensable, must be of such severity as to cause disability. Pain and mental suffering are not considered compensable unless they result in loss of wages or ability to earn wages. Thus in Kansas[1] compensation was awarded for injury causing a continuing pain which prevented the employee from working. In California[2] an employee was struck on the head by a falling tool and suffered severe headaches. The physician prescribed rest, which resulted in recovery. Compensation was awarded for the period during which the employee was obliged to be absent from his employment.

Shock from a fall from a roof produced dementia and was compensated by the Kentucky board.[3] In California[4] an employee fell and fractured a lumbar vertebra. The injury caused traumatic neurosis verging upon psychosis, which condition was aggravated by long continued litigation and many medical examinations. The commission in continuing the compensation said:

> "The Compensation law is not designed to cover those only who are without spot or blemish, but all who work, whether they are by nature neurotic or otherwise unstable and prone to suffer from disease complications in the event of injury, so long as the injury is a substantial contributory cause of the condition in question."

Where an injury caused insanity which prevented the employee from filing claim for compensation within the statutory period, the question arose whether a claim filed after such three-month period would be valid. The Oregon Supreme Court[5] held the law made no exception in favor of the insane, and compensation was denied. A more liberal decision comes from Nebraska[6] where a workman was confined to a hospital for the insane a year and a half after the injury to his head. An award was affirmed because the employer had knowledge of the accident, although no formal notice had been given by the employee.

That mental incompetency may cause delay in giving notice of injury or of filing claim for compensation has been noted in some of the compensation acts. Thus ten states[7] provide that

[1] *Trowbridge* v. *Wilson & Co.* 170 Pacific 816.
[2] *Frasier* v. *Universal Film Corporation.* California. Industrial Accident Commission. Decisions. Vol. 5, p. 179.
[3] *Woolfolk* v. *Griffiths & Sons Co.* Kentucky. Workmen's Compensation Board. Leading Decisions. 3rd Report, p. 45.
[4] *Danielson* v. *Mountain Copper Co., Ltd.* California. Industrial Accident Commission. Decisions. Vol. 8, p. 2.
[5] *Lough* v. *State Industrial Accident Commission.* 207 Pacific 354.
[6] *Simon* v. *Cathros Co.* 162 N. W. 633.
[7] Kansas, Maine, Massachusetts, Minnesota, Michigan, Nebraska, New Hampshire, Nevada, Rhode Island, Vermont.

the period of limitation does not run during mental incompetency, and in eleven states[1] there is no limitation of time for giving notice or filing claim so long as the mental incompetent has no guardian. In Nevada, failure to give notice or file claim may be excused by the commission on several grounds, among which is mental incompetency. In Texas, for "good cause in meritorious cases" the board may waive strict compliance as to notice and filing of claims. Fifteen states[2] specify a certain period in which all notices and claims are to be presented but allow an extension of the time where there is a "reasonable excuse" or "due cause," etc., and in some of these acts "mental incapacity" is specifically mentioned. As a general rule the extended time for presenting claims in these states is limited and ranges from ninety days to two years. The acts of five states[3] make no provisions pertaining to this matter.

Injuries Resulting From Forces of Nature

Injuries resulting from exposure to inclemencies of the weather, heat and cold, to lightning, tornadoes, etc., are considered accidental injuries. The main question of compensation in these cases hinges upon whether such disability is injury "arising out of the employment." The only exception is in Pennsylvania where the act does not include this clause and where it is sufficient that the accident occur in the course of the employment. The other states in their decisions go very thoroughly into the question whether these accidents are due to occupation and the general rule is very clearly stated in a Wisconsin decision[4] as follows:

> "As a general rule an employer is not responsible for damages caused to workmen by lightning, storms, sunstroke, freezing, earthquakes, floods, etc. These are considered as forces of nature which human vigilance can neither foresee nor prevent. Ordinarily the victim must bear alone such burdens inasmuch as human industry has nothing to do with it and inasmuch as the employee is no more subject thereto than any other person. Every human being is liable to suffer from events in which he has no share or responsibility. If the accident and the employment show no relationship of cause and effect, but where the work, or where conditions

[1]Arizona, California, Georgia, Idaho, Indiana, Kentucky, Louisiana, Montana, New York, Virginia, Wyoming.

[2]Alabama, Colorado, Connecticut, Delaware, Illinois, Iowa, Maryland, New Jersey, New Mexico, North Dakota, Oklahoma, Pennsylvania, South Dakota, Tennessee, Wisconsin.

[3]Ohio, Oregon, Utah, Washington, West Virginia.

[4]*Beaulieu* v. *Ellingson Lumber Co.* Affirmed, 169 N. W. 586. Wisconsin. Industrial Commission. 7th Annual Report, p. 44.

under which it is carried on exposes the employee to the happening of a force of nature, like freezing, as in this case, or contributes to bring into play or to aggravate its effects, then we are no longer face to face with the sole force of nature. Then it is no longer a risk to which everybody is exposed; it is a danger which threatens more particularly the employee who works under special conditions. So when the forces of nature are augmented by the employment it becomes an accident arising out of the employment."

Frostbite

In this case the employee was a lumberjack who froze his toes in severe weather. A special effort to complete a certain amount of work caused his feet to perspire which led to the freezing of his toes on his way home. These conditions rendered the employer liable for compensation.

The test in these cases therefore seems to rest upon the question whether the workman is subjected to conditions common to the community at large or whether incidents peculiar to his employment cause an additional hazard.

In an Iowa case,[1]

> "The evidence disclosed that claimant was one of a number employed at trench making. The weather was unusually cold. He alone was required to work in a position wholly exposed, while his fellow workmen found shelter in the ditch where they were digging. The nature of his employment was such that he could not consistently seek relief. There was additional exposure to fingers because of the work of shoveling, contact with a cold shovel handle and gripping which impeded circulation."

Compensation was awarded for loss of six fingers and a thumb.

In a leading case in this country the employee, a longshoreman working on a wharf, froze his hands. The Massachusetts Supreme Judicial Court[2] affirmed an award because the claimant was exposed to "materially greater danger and a likelihood of getting frozen than the ordinary person or outdoor worker" on the date in question, although it was pointed out the materials handled were not cold and ample opportunity was afforded the workman to swing his arms and keep up his circulation.

The Minnesota Supreme Court[3] held that freezing comes suddenly and violently and is therefore a personal injury by accident. In this case the employee was cutting timber five miles from shelter and although the weather was extremely cold he

[1] *Smith* v. *Turner Improvement Co.* Iowa. Workmen's Compensation Service. 4th Biennial Report, p. 103.

[2] *In re McManaman.* 113 N. E. 287.

[3] *State ex rel Virginia & Rainey Lake Co.* v. *District Court of St. Louis County.* 164 N. W. 585.

was prohibited from building a fire. Such a condition was considered a special hazard of the employment not shared by the community, and compensation was awarded.

A New Jersey commissioner[1] awarded compensation to a workman because his hands became frozen during the period of unconsciousness resulting from a fall.

An award of compensation was also sustained by the New York Supreme Court[2] where the employee froze both hands while engaged in floating ice by means of a pike pole. The thermometer was 14° below zero and the accident was found to have been due to the necessity of holding on to the pike pole in such a manner as to expose the claimant to an added hazard.

A janitor, who was obliged to clear a walk after a heavy snowstorm, froze a great toe as a result of the exposure. It became necessary to amputate his leg as a result of the injury. Full compensation was allowed and upon appeal the award was sustained by the Minnesota Supreme Court.[3]

On the contrary, in New Jersey,[4] a laborer employed solely to remove snow from street railway tracks sustained a severe injury by freezing of his toes but compensation was denied because the accident was merely a consequence of the severity of the weather to which all persons in the locality whether so employed or not were equally liable.

Where a snowstorm raged with such severity as to cause a miner to lose his way and freeze to death, the Colorado commission granted compensation to his widow because death was due to an accident suffered in the course of employment.[5]

The freezing which a member of the fire department suffered while extinguishing a fire was a matter reasonably to be expected in his employment and, being in the nature of an occupational disease rather than an accident, compensation was denied by the Michigan Court.[6]

In Connecticut[7] frostbite produced lesions of the victim's face through which the germ of erysipelas entered. Compensation was granted because "the lesion whether produced by a frostbite or a blow must be held to be a personal injury within the Act."

[1] *Gerdes* v. *Hunter*. *Weekly Underwriter*. Vol. 102, No. 15, Apr. 10, 1921, p. 684.
[2] *Quick* v. *Illston Ice Co*. 195 App. Div. 676.
[3] *State ex rel Nelson* v. *District Court of Ramsey County*. 164 N. W. 917.
[4] *Laspada* v. *Public Service Railway Co*. 38 New Jersey, L. J. 102.
[5] *Grant* v. *Yellow Jacket Mines*. *Weekly Underwriter*. Vol. 101, No. 2, July 12, 1919, p. 70.
[6] *Savage* v. *City of Pontiac*. 183 N. W. 798.
[7] *Larke* v. *John Hancock Mutual Life Insurance Co*. 97 Atlantic 320.

Sunstroke and Heat Prostration

Cases of heat prostration and sunstroke generally follow the English rule laid down in *Ismay* v. *Williamson*, 1908 A. C. 437, where a workman in a weak and emaciated condition, while raking ashes from under the boiler in the stokehole of a steamer, received a heatstroke from the effect of which he died. Affirming an award in that case, Lord Loreburn said:

> "To my mind the weakness of the deceased which predisposed him to this form of attack is immaterial. The fact that a man who has died from a heat stroke was by physical debility more likely than others so to suffer can have nothing to do with the question whether what befell him is to be regarded as an accident or not. In my view this man died from an accident. What killed him was a heat stroke coming suddenly and unexpectedly upon him while at work. Such a stroke is an unusual effect of a known cause, often, no doubt, threatened, but generally averted by precautions which experience, in this instance, had not taught. It is an unlooked-for mishap in the course of his employment. In common language, it was a case of accidental death."[1]

As to cases of sunstroke or heat prostration, the same rules apply as for frostbites. In a Virginia decision[2] compensation was allowed to the widow of a laborer on account of sunstroke.

> "Evidence was overwhelming that the weather was very hot, that [the claimant] was in a low field, marked by a great humidity working with a pick and shovel at midday under the rays of an August sun and was thus particularly exposed to a danger greater than is incident to the commonalty and incurring a special degree of exposure to the risk."

The Supreme Court of Minnesota[3] upheld an award of the commission where a laborer working in a sandy street died as a result of exposure to the sun.

> "It had rained the night before; the sand was wet; the sun's rays direct, thereby enhancing liability to sunstroke. Decedent was exposed to the direct rays of the sun in addition to the humid atmosphere emanating from the wet street,"

and the employee's place of work therefore created a substantially increased risk, greater than that to which the community was exposed, and thus contributed to cause the accident.

In a Connecticut case,[4] a workman overcome by sunstroke while shoveling coal was awarded compensation. It was held that, although the employment did not expose the employee to a

[1] *Ismay* v. *Williamson*, 1908 A. C. 437: quoted by Bradbury. "Workmen's Compensation and State Insurance Law." Vol. 1, p. 376.

[2] *Lynch* v. *Hampton Roads Engineering and Construction Co.* Virginia. Industrial Commission Opinions. Vol. 1, p. 160.

[3] *State ex rel Rau* v. *District Court of Ramsey County.* 164 N. W. 916.

[4] *Ahern* v. *Spier.* 105 Atlantic 340.

substantially greater degree of heat and the effects of the sun than others in the same employment and many other outdoor workers, the exposure in his employment was far greater than for the rest of the community.

In another Connecticut case[1] in which the ruling and facts were very much the same, the court in granting the award describes sunstroke as a disturbance of the portion of the brain controlling the regulation of heat in the human body, and, coming on suddenly, is a personal injury by accident.

Compensation was awarded in a Massachusetts case[2] where the nature of the work in a gravel pit peculiarly exposed the employee to sunstroke, but the same court[3] dismissed a claim where it was not shown that the workman was subjected by reason of his employment to a greater danger from heat prostration than other outdoor workers.

A Rhode Island court[4] approved an award where a stationary fireman was overcome by excessive heat while working in a boiler room. The injury arose out of the employment because he was subjected to conditions not common to the community.

In Pennsylvania[5] an employee, while tending a lunch counter died from heat prostration. The board held this to be an accidental death as "the casualty was attributable solely to the unexpected and violent effect of the heat upon the physical structure of the deceased's body."

In a Nebraska[6] case the award is based on the fact that sunstroke was an accidental injury and in this particular case there was a special risk or exposure to the heat of the sun. Work in the heat, humidity and poor ventilation of a building constructed of sheet iron walls and a tarred roof built on low ground contributed to cause the sunstroke.

The Delaware board[7] refused to compensate for heatstroke because the employment did not contribute to the injury. In this case, the workman was employed in a well-ventilated building with plenty of opportunity to rest, and the work itself was not particularly arduous. The opinion held that heatstroke from high temperature and excessive humidity was an accident but did not arise out of the employment because there was no

[1] *Cunningham* v. *Donovan*. 105 Atlantic 622.
[2] *In re McCarthy*. 123 N. E. 87.
[3] *In re Dougherty*. 131 N. E. 167.
[4] *Walsh* v. *River Spinning Company*. 103 Atlantic 1025.
[5] *Lane* v. *Horn & Hardart*. 104 Atlantic 615.
[6] *Young* v. *Western Furniture Manufacturing Company*. 164 N. W. 712.
[7] *Holland* v. *Pyrites*. Delaware. Digest of Workmen's Compensation Cases. 1918–1919, p. 26.

evidence of special exposure to heat artifically created by the employer.

The New York Supreme Court found that the death of a driver of a brewery wagon resulting from heat prostration did not arise out of the employment although the day was extremely hot. He was not occupied at strenuous work while exposed to the sun but was simply driving along under the shade of a wagon umbrella.[1] The New York board, however, in another case has granted compensation for heat stroke.[2]

Lightning

The same doctrine is followed in cases of accident from lightning. In Colorado[3] an oxyacetylene welder while working on a steel bridge was struck by lightning and his dependents were awarded compensation because the exposure was greater than that of the community at large, the court holding that death was caused by accident arising out of his employment.

In Connecticut[4] a workman employed in a city park was struck by lightning while seeking shelter under a tree during a storm. His act of seeking shelter arose out of the employment and was necessary to the continuation of his work, and compensation therefore was granted. Similarly, a road worker in Utah[5] before reaching shelter in a storm was struck by lightning and the accident was held to arise out of the employment. The Minnesota Supreme Court[6] sustained an award where a driver for an ice company, required to follow a fixed route without regard to weather conditions, sought shelter under a tree and was killed by a bolt of lightning. The court decided that the injury arose out of the employment. The Washington commission[7] awarded compensation to a woodsman who was sawing a log when lightning struck a tree, passed into the log and severely burned the workman. The Pennsylvania law requires only that injury occur during the employment, and it was not held to be necessary in a case[8] of death by lightning to determine whether the death arose out of the employment.

[1] *Campbell* v. *Clausen Flannagan Brewery*. 171 N. Y. Supp. 522.
[2] *Sherman* v. *India Wharf Brewing Co.* New York. Department of Labor. Special Bulletin No. 106, p. 24.
[3] *Hassell Iron Works Co.* v. *Industrial Commission*. 201 Pacific 894.
[4] *Chiulla de Lucca* v. *Board of Park Commissioners*. 107 Atlantic 611.
[5] *State Road Commissioners* v. *Industrial Commission*. 190 Pacific 544.
[6] *State ex rel People's Coal & Ice Company* v. *District Court of Ramsey County*. 153 N. W. 119.
[7] *Erickson* v. *Wagner & Wilson*. *Weekly Underwriter*. Vol. 93, No. 25, Dec. 18, 1915, p. 772.
[8] *Tomazezki* v. *Carnegie Steel Company*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 204.

In decisions denying benefits because of injury from lightning it has been held, on the contrary, that the employment did not expose the employee to a greater risk than other members of the community. Thus the Supreme Court of Wisconsin,[1] in deciding a case in which a workman on a dam was killed by lightning, held his employment was no more a hazard from lightning than any other outdoor work and compensation was refused. Likewise in Michigan[2] compensation was denied a section hand who took refuge in a barn and was killed by lightning, because he was in no way more exposed to injuries from lightning by reason of his employment than was the community at large in that locality. The question as to whether he had obtained shelter did not figure in the argument of this case but only that the peculiarities of the workman's employment did not contribute to the accident. Similar conditions obtained in a Connecticut[3] case where compensation was denied.

Tornado

A tornado destroyed an electric generator station and ice plant, resulting in the death of the chief engineer. Escaping steam and ammonia fumes contributed largly to his injuries. The Supreme Court of Illinois[4] maintained that although the risk of being injured by tornado may have been a risk common to the public in the vicinity of the cyclone regardless of employment, yet the circumstances of the deceased's employment brought on an unusual risk and danger from destruction of the building in which he was employed. Compensation was awarded his dependents because death arose out of the employment. However, compensation was denied where an estimator was sent to another town to figure on some mill work for a sash and door factory and while there was killed in a tornado, in which case the Wisconsin commission[5] held that the deceased "was not exposed to a hazard which was peculiar to that industry [mill work] or which was rendered exceptionally great by reason of the employment."

Few commissions require comparison of the hazard of the employment to that of the same class of workers in the community, but the greater number make the comparison of the

[1] *Hoenig* v. *Industrial Commission of Wisconsin.* 150 N. W. 996.
[2] *Klawinski* v. *Lake Shore & Mich. Southern Ry.* 152 N. W. 213.
[3] *Carroll* v. *Brock.* Connecticut. Compensation Decisions. Vol. 2, p. 581.
[4] *Central Illinois Public Service Commission* v. *Industrial Commission.* 126 N. E. 144.
[5] *Dalton* v. *Segelke Kohlhaus Mfg. Co.* Wisconsin. Industrial Commission. 9th Annual Report, p. 33.

hazard of the employment with that of people in the community whether they are workers or not.

Pneumonia

Judging from a study of compensation and court records, pneumonia is one of the more common diseases for which compensation is asked, on the ground that it is caused by sudden exposure to extremes of temperature, or follows an injury to the body, particularly an injury in the region of the chest. Such an injury may be a blow, a strain, or a wound causing excessive hemorrhage which weakens the normal resistance of the body and permits the development of pneumonia.

Pneumonia following back strain caused by heavy lifting was compensated in Michigan.[1] But where it developed three months from the date on which a workman suffered a similar accident the Pennsylvania board[2] held that the chain of causation was broken and accident was not the proximate cause of death from pneumonia. In another Pennsylvania case[3] pneumonia developed seventeen days after the employee had been overcome by inhaling charcoal gas while cleaning a beer tank. The evidence in this case was held not sufficient to justify the conclusion that there was any connection between the gas inhalation and the pneumonia.

Pneumonia as a result of exposure was compensated by a commissioner in Connecticut,[4] but the Supreme Court of that state reversed the ruling and denied compensation on the theory that pneumonia could not be classified as a bodily injury. In this case the employee was called upon to substitute for another fireman who was unable to reach his work because of a severe snowstorm. The deceased was obliged to go to work at 2 a. m. without breakfast and to travel three-quarters of a mile through deep snow in order to reach his place of employment. He arrived exhausted and wet to the waist and was obliged to work for twelve hours in this condition, his work requiring him to be at times before the open mouth of the furnace and at other times to wheel ashes out into the yard. The court held that the resultant pneumonia, though accidentally incurred through

[1] *Bayne* v. *Riverside Storage and Cartage Co.* 148 N. W. 412.
[2] *O'Connell* v. *Cambridge Coal Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 421.
[3] *Burnatz* v. *Weisbrod & Hess Brewing Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 128.
[4] *Linnane* v. *Aetna Brewing Co.* 99 Atlantic 507.

exhaustion and exposure, could not in and of itself be designated as bodily injury. A similar ruling comes from Pennsylvania where the board held[1] that exposure to cold and wet, whereby the employee contracted pneumonia, was not violence to the physical structure of the body as contemplated under the workmen's compensation act.

Exposure and a drenching received in January caused a bad cold which developed into pneumonia and disabled the employee for several months. The Minnesota Court[2] denied compensation because the statute gives compensation only for accidents which happen suddenly and violently and produce at the time injury to the physical structure of the body. Pneumonia developing from exposure and wetting was held to be a disease and not an injury.

Pneumonia affecting a fireman as a result of drenching and exposure was held an accidental injury by a Connecticut commissioner, 3rd District,[3] but compensation was withheld because the status of the deceased was not that of an employee under the act. This decision reverses the rule established by the Connecticut court in *Linnane* v. *Aetna Brewing Co.*, *supra*. The decision in the Linnane case was made under the act as it read in 1915. Thereafter the act was amended (Section 5341, G. S. 1921) so that there is no bar to compensation if the injury "cannot be traced to a definite occurrence which can be located in point of time and place." Under this provision the Connecticut act now covers pneumonia due to exposure.

Michigan has two very similar cases[4] where firemen employed by the municipality died from pneumonia as a result of drenching and freezing while fighting fires in winter weather. The Supreme Court held these incidents were reasonably to be expected in the course of a fireman's duties and therefore cannot be classified as an accident. In discussing the Landers case the court said:

> "[The claimant] was employed as a fireman. It was part of his regular duties to go to fires and help extinguish them. In doing so it was not an unusual thing for him to get wet.

[1] *Winters* v. *Commonwealth*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 76.

[2] *Brown* v. *National Granite Works*. Minnesota. Department of Labor and Industries. Bulletin No. 17, p. 92.

[3] *McDonald* v. *City of New Haven*. Affirmed, 109 Atlantic 176. Connecticut. Compensation Decisions. Vol 3, p. 202.

[4] *Savage* v. *City of Pontiac*. 183 N. W. 798; *Landers* v. *City of Muskegon*. 163 N. W 43.

> Not only does the proof show, but we think it is a matter of common knowledge, that firemen are subjected to exposure and drenching while attempting to extinguish fires. We must therefore conclude that pneumonia was brought on, not by an unexpected event, but by an event which was an incident to his regular employment."

In Massachusetts[1] compensation was awarded a member of a local fire department who became "drenched with water and saturated with smoke," from which pneumonia developed. The board held that death was due to personal injury resulting from exposure to the water and smoke.

In a case where a woodsman cut his foot with an axe and bled profusely, exposure to the weather in his weakened condition brought on pneumonia. Although compensation was denied by the commission, the Supreme Court of Washington,[2] reversed the commission and granted an award, on the ground that it was not necessary that the wound had been itself the cause of death. If the wound was the proximate cause which directly set in motion the train of events which ultimately caused death, it was sufficient to sustain an award for compensation.

An employee was gassed in the course of his employment, the exposure resulting in acute bronchitis and eventuating in lobar pneumonia. The Pennsylvania board[3] held that death was due to accidental injury causing violence to the physical structure of his body.

Traumatic pneumonia is compensated in all states where the causal connection between the injury and the disease can be established. Thus the Wisconsin commission[4] made an award where an employee fell and struck his right side against a washstand, and pneumonia developed directly under the point of injury. A lineman while engaged in his work on a pole came into contact with a live wire which caused him to fall to the ground. In landing, his knees doubled up, striking him violently on the chest. Ten days after the accident he died of lobar pneumonia. The award of the Pennsylvania board was upheld by the state Supreme Court,[5] which said:

> "The findings of the referee clearly show the injury to the chest resulted in continuous pain from the time of the acci-

[1] *In re McPhee.* 109 N. E. 633.
[2] *Anderson* v. *Industrial Insurance Commission.* 199 Pacific 747.
[3] *McNulty* v. *Aetna Chemical Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 352.
[4] *Carlson* v. *Rhinelander Paper Co.* Wisconsin. Industrial Commission. 5th Annual Report, p. 30.
[5] *Murdock* v. *N. Y. News Bureau.* 106 Atlantic 788.

dent until the trouble was diagnosed by the physician as lobar pneumonia, and we find nothing in the record to justify the inference, that between the time of receiving the injury and the development of the disease, there were other causes from which pneumonia might have been contracted."

Pneumonia was similarly compensated in New York[1] when the disease followed an injury to the chest.

Where an employee fell upon a rail and injured his chest, pneumonia subsequently developing, it was claimed by the employer that the worker had pleurisy previous to the accident. The Pennsylvania board[2] held:

"Even if the testimony should establish the fact that at the time of the accident and immediately prior thereto the employee was suffering from pleurisy, there is authority that if the accident in any way aggravated or accelerated the disease so as to produce death the case would fall within the meaning of the act."

However, compensation was not granted in a California case[3] where the injury resulted in a bruise to the left side. The commission held that as there were no marks, no broken ribs nor trauma to the lung itself, pneumonia was not caused by the accident but was merely coincident thereto.

Death from pneumonia has also been compensated in New York, Michigan and Indiana[4] when it was the result of weakened condition, lowered vitality, loss of blood, etc., all of which lessened the chances for recovery. In a Minnesota case[5] the employee caught cold three months after his release from a hospital where he had been confined with a fractured leg. His weakened condition, according to the court, rendered him unable to combat the cold. It was held that, but for his condition he would in all probability have recovered from the attack, and compensation was therefore awarded.

Erysipelas may intervene between the occurrence of the injury and the development of pneumonia. This sequence of events has called for compensation in both Indiana[6] and Connecticut,[7] the decisions being that the pneumonia was the result

[1] *Delso* v. *Crucible Steel Co.* 187 N. Y. Supp. 66.

[2] *Poluskiewicz* v. *Philadelphia & Reading Coal & Iron Co.* Affirmed, 257 Pa. 305. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 83.

[3] *Dunford* v. *Moore Shipbuilding Co. Weekly Underwriter.* Vol. 100, No. 25, June 21, 1919, p. 956.

[4] *McGrath* v. *Winternitz.* Affirmed, 196 App. Div. 910. New York. Department of Labor. Special Bulletin No. 106, p. 204.
Tanner v. *Aluminum Castings Co.* 178 N .W. 69. Michigan.
Republic Iron & Steel Co. v. *Markcowicz.* 129 N. E. 710. Indiana.

[5] *Tallon* v. *Superior Iron Mining Co.* Minnesota. Department of Labor and Industries. Bulletin No. 17, p. 83.

[6] *Fort Wayne Rolling Mill* v. *Buanno.* 122 N. E. 362.

[7] *Larke* v. *John Hancock Mutual Life Insurance Co.* 97 Atlantic 320.

of a personal injury. The New York board[1] dismissed a claim on the theory that causal relations between the disease and the accident had not been established, in a case where compensation was claimed for death from bronchial pneumonia following an infection of the leg, although it was admitted that the infection may have reduced the claimant's vitality and made him more susceptible to the disease. The New York Supreme Court[2] rendered a like ruling in a similar case.

The element of accident is discussed in a New York case[3] where a state game protector, while removing a plug from the bottom of a state boat by way of preparing it for winter quarters was compelled to keep his arm and shoulder in icy water for fifteen to twenty minutes. His death from pneumonia due to this exposure was held the result of accidental injury—an accident meaning "an undesigned and unforeseen occurrence of an afflictive or unfortunate character, resulting in bodily injury to a person."

Poisonous Gases

The inhalation of poisonous gases may develop disabilities and often cause death. Thus in New York[4] an employee inhaled smoke and gas fumes while repairing a boiler. As a result he became disabled with bronchitis and myocarditis from the effects of which he died. Death was held to be due to accident.

Employees in poor physical condition are more susceptible to the effects of poisonous gases and by exposure to such gases any pre-existing disease in such persons is often accelerated and aggravated to a fatal termination. Thus a workman with a weak heart inhaled carbon monoxide fumes and the resultant death was compensated by the Utah commission.[5] Also in New Jersey,[6] a workman, while attempting to stop the escape of phosphorus oxychloride gas from a leaking pipe, inhaled some of the fumes. The accident "lighted up" a latent tubercular condition, thereby causing a prolonged period of disability for which compensation was granted. Likewise an employee in

[1] *Slatterly* v. *Baker Smith & Co.* New York. Department of Labor. Special Bulletin No. 106, p. 208.

[2] *Landeau* v. *Heyman Embossing Co.* New York. Department of Labor. Special Bulletin No. 106, p. 206.

[3] *Christian* v. *State Conservation Commission.* 182 N. Y. Supp. 347.

[4] *Prior* v. *Oil Well Supply Co.* 200 App. Div. 848.

[5] *Benson* v. *Amalgamated Sugar Co.* Utah. Industrial Commission. Report of Decisions. 1918–1920, p. 155.

[6] *Keller* v. *Celluloid Co. Weekly Underwriter.* Vol. 102, No. 22, May 29, 1920, p. 962.

Minnesota,[1] by inhaling gas and vapors from vats in a poorly ventilated premises, became sick and unable to work. His physical collapse was held to be compensable although he was in poor physical condition at the time.

Inhalation of poisonous gases over a long period of time is not recognized as an accident but has been compensated as an occupational disease in Massachusetts.[2] In this case the injury resulted in total blindness. For the same reason in New York[3] the board refused compensation where a patrolman at a chemical plant died as a result of inhaling poisonous fumes during a period of eighteen months. New York now includes the inhaling of certain gases under its schedule of compensable occupational diseases. Nevertheless, chlorine gas poisoning in employment not being included among the occupational diseases listed in the law, compensation was denied by the New York Supreme Court[4] as not coming within the law. In this case the court held that the common law remedy for damage exists as to cases not covered by compensation.

On the other hand, where the inhalation is sudden and unexpected as to occurrence and unusual as to quantity, the result is deemed accidental and compensable. This was the case in California where a show card writer used wood alcohol in an air brush in writing cards, and owing to a rush of work used more alcohol than usual, so much that his sight was permanently impaired. This was compensated as an accident by the California Supreme Court.[5] Likewise a laborer for a gas company inhaled illuminating gas while repairing a leaking pipe and the undue strain upon his heart caused death within a few hours. The New York Supreme Court[6] affirmed an award to his dependents. Also when a miner in Illinois[7] died as a result of inhaling bad air in a poorly ventilated part of a coal mine, compensation was allowed for the accident. The accidental inhaling of carbon monoxide was compensated as a personal injury in Michigan.[8]

[1] *Meisel* v. *Swift & Co.* Minnesota. Department of Labor and Industries. Bulletin No. 17, p. 95.
[2] *In re Hurle.* 104 N. E. 336.
[3] *Gray* v. *Semet Solvay Co.* 231 N. Y. Rep. 518.
[4] *Trout* v. *Wickwire Spencer Steel Corp.* 195 N. Y. Supp. 528.
[5] *Fidelity Casualty Co* v. *Industrial Commission.* 171 Pacific 429.
[6] *Mahoney* v. *Troy Gas Co.* Affirmed, 186 App. Div. 924. New York. Department of Labor. Special Bulletin No. 97, p. 29.
[7] *Giacobbia* v. *Kerns-Donnewald Coal Co.* Illinois. Industrial Board. Bulletin No. 1, p. 196.
[8] *Holnagle* v. *Lansing Fuel & Gas Co.* 166 N. W. 843.

In a New York case,[1] a workman was partly overcome by coal gas and steam and the resultant congestion of his lungs was followed by tuberculosis. Upon his death the court affirmed an award to the widow.

A fumigator in California[2] one day inhaled more gas than he was accustomed to and died. The commission awarded death benefits. The inhaling of gases and fumes from a mine explosion was held a compensable accident in Colorado[3]. The Indiana Supreme Court[4] affirmed an award to the widow of a miner who died from gas and fumes inhaled in his work.

Typhoid Fever

Typhoid fever occurring among employees in a given industry has been traced directly to polluted water which they drank while at work. The fact that this disease is caused by a definitely known and easily identified micro-organism and that it has a definite period of incubation makes its connection with an industrial disability more than a casual one. In this respect it is unlike tuberculosis, for instance, which, although due to a definitely known organism, has no set period of incubation. The sources from which typhoid fever may be contracted are also fairly well limited, so that it is one of the most circumscribed of the acute infectious diseases.

As it can be contracted only by being taken into the system with food or drink, it is not the result of an accident or injury in the general use of these terms, and it is only as the commissions and courts have interpreted its occurrence as arising out of or in the course of employment that it has been held to be compensable.

The Indiana court[5] has held that the contracting of this disease constituted an injury within the meaning of the compensation law because of the inflammation, fever and intestinal ulcer formation which accompany cases of this disease.

The same ruling was established in an Ohio[6] case in which compensation was allowed because of the death of a park employee caused by drinking impure water. The only drinking water available in the vicinity of his work was a spring. After

[1] *O'Dell* v. *Adirondack Electric Power Corp.* 223 N. Y. 686.
[2] *Huntington* v. *Oelke and Huntington.* California. Industrial Accident Commission. Decisions. Vol. 7, p. 27.
[3] *Comfort* v. *Lease. Weekly Underwriter.* Vol. 100, No. 15, April 12, 1919, p. 557.
[4] *Utilities Coal Co.* v. *Herr.* 132 N. E. 262.
[5] *Wasmuth-Endicott Co.* v. *Karst.* 133 N. E. 609.
[6] *Industrial Commission* v. *Cross.* Ohio Court of Appeals, September, 1921.

the employee was taken ill, the spring water was examined by the health department and found to contain typhoid fever germs. In the opinion of the court,

> "The man was as much injured by the contracting of typhoid fever as if injury had been inflicted by external force."

This case was appealed to the Ohio Supreme Court which reversed the decision of the lower court and denied death benefits because typhoid fever was not an injury within the meaning of the workmen's compensation act. As expressed in this opinion,[1]

> "the term 'injury' does not include diseases which are contracted as distinguished from diseases which are occasioned by or follow as a result from physical injury."

The leading decision in the United States on this question was handed down by the Supreme Court of Wisconsin,[2] which held that typhoid fever contracted by drinking impure water furnished by the employer was a compensable accidental injury. The facts in this case were briefly these: The employing company had a dual water supply in its factory; one source obtained from the city mains, the other secured from a stream near by. The stream was a badly polluted body of water and the factory supply was taken but a short distance below the sewer outlet of the factory. The two water distribution systems were connected by a pipe in the boiler room, but were kept separated by a globe valve, reinforced by a check valve set aginst the polluted supply.

A number of the employees were in the habit of obtaining drinking water from a faucet in the boiler room which was so located that the polluted river water could reach it.

Subsequent to the epidemic these fittings were examined and the check valve found to be so badly worn that it was useless. The globe valve being operated by hand, it was also probable that leakage took place through it.

Some thirteen cases of typhoid fever with two deaths occurred among the workers in this mill during one month, the majority within two weeks. As there were at the time no other typhoid cases in the houses of the victims nor in the town, and as it was found that the polluted water could easily enter the pure water system, and also since the cases occurred so close together as

[1] *Industrial Commission* v. *Cross*. 104 Ohio 561.
Vennen v. *New Dells Lumber Co.* 154 N. W. 640.

strongly to suggest a common and almost definite source of infection, the commission awarded compensation to the dependents of the deceased workers, and to those who recovered, on the ground that the disease was caused by accident while performing service growing out of and incidental to the employment. Upon appeal the Supreme Court sustained the findings of the commission.

The California commission rendered an opinion[1] in keeping with the Wisconsin decision where typhoid fever resulted from drinking polluted water furnished at a construction camp. The evidence showed that while the claimant lived at the camp the employees polluted the water of the stream above where he drank and also that a number of the employees suffered from typhoid fever at about the same time.

The Supreme Court of Minnesota[2] rendered a decision contrary to the Wisconsin ruling and held that the contracting of typhoid fever was not an accident under the compensation law. In reversing the award of the lower court the Court said:

> "The evidence shows that typhoid fever is a germ disease; that it is produced by taking typhoid bacilli into the alimentary canal; that no deleterious effects result until the bacilli taken into this canal have multiplied enormously; and that it requires more than a week after the infection for the disease to develop sufficiently for its symptoms to be discernible. The disease does not result from an event which happens 'suddenly and violently' nor from an event which produces 'injury to the physical structure of the body' at the time it happens."

In a recent case in Michigan[3] the court awarded compensation to a hotel waitress who claimed that she contracted typhoid fever through drinking water supplied to the hotel from an artesian well. The hotel management, thinking the city water was contaminated, dug an artesian well for its own use. The plaintiff drank this water only, which, upon examination by the health officer, was found to be contaminated. In the absence of any other known source of infection, the court affirmed the award, holding the contracting of the typhoid fever to be an accident occurring in the course of employment.

A Connecticut commissioner[4] held, in general, that contraction of typhoid fever was a compensable injury, but in the case under

[1] *Price* v. *Bates et al.* California. Industrial Accident Commission. Decisions. Vol. 4, p. 99.
[2] *State ex rel. Fairbault Woolen Mills Co. et al.* v. *District Court of Rice County.* 164 N. W. 810.
[3] *Frankamp* v. *Fordney Hotel, et. al.* 193 N. W. 204.
[4] *Clark* v. *Kelly Co.* Connecticut. Compensation Decisions. Vol. 3, p. 434.

consideration the award was withheld for lack of proof that contagion came from the employment. The period of incubation had more than elapsed between the drinking of the impure water and the manifestation of the disease and there was no evidence to prove that the water contained the typhoid germ.

A Kentucky[1] claimant was refused compensation where the claim was based on the theory that an injury resulting in a broken leg lowered the employee's resistance to disease and caused him to succumb to an attack of typhoid fever. The connection between the accident and typhoid fever was considered as too remote to hold one the result of the other.

A somewhat similar case to that from Kentucky was heard in the New York courts.[2] In this instance an employee fell, receiving serious injuries to his head. At the time, he was suffering from typhoid fever in the incubation stage, and it was claimed that the accident so weakened his resistance that he succumbed to the typhoid infection. The court awarded compensation on the ground that the injury aggravated a pre-existing disease.

The federal courts[3] have held that the occurrence of typhoid fever, contracted as a result of drinking infected water, is an accidental injury inasmuch as the accident consisted of the unexpected happening. While this case did not come under the compensation law it is frequently cited by courts in discussing such compensation cases coming before them for settlement.

Miscellaneous Diseases Due to Accident

Actinomycosis

Actinomycosis, occurring in a mill worker who was filling sacks with ground grain, was compensated in California.[4]

Acute Pericarditis

Acute pericarditis with serofibrinous exudate resulting from a fall was the basis of an award in a New York case.[5]

Caisson Disease

Caisson disease is usually classified as an occupational disease, since it is peculiar to employments in which the work is con-

[1] *Blankenship* v. *Majestic Coal Co.* Kentucky. Workmen's Compensation Board. Leading Decisions. 2nd Report, p. 153.
[2] *Banks* v. *Adams Express Co.* 176 App. Div. 916.
[3] *Aetna Life* v. *Portland Gas & Coke Co.* 229 Federal 552.
[4] *Hartford Accident & Indemnity Co.* v. *Industrial Commission.* 163 Pacific 225.
[5] *La Fleur* v. *Wood.* 164 N. Y. Supp. 910.

ducted under air pressure. A Michigan decision[1] compensated for a disability of this kind as an accidental injury where through negligence of a co-employee the air pressure was released too rapidly and a workman was overcome and died. The employer's contention that death was due to an occupational disease was not sustained. This case was the result of a sudden and unforseen condition whereas an occupational disease, according to the court, develops by slow process.

Diabetes

An employee, 72 years of age was caught in a door and severely bruised and died seventeen days later from diabetes. The New Jersey Supreme Court[2] in affirming death benefits in this case held that death may be considered the result of the accident "when undeveloped and dangerous physical conditions are set in motion by the accident producing such result."

In a Michigan case[3] it was held that diabetes developed from injury and shock and compensation was awarded. And in Pennsylvania[4] an engineer in a railway collision was jarred so that acute diabetes set in and, failing rapidly, he died in six weeks. Death was held the result of the accident.

In another Pennsylvania case[5] the board allowed death benefits because of an accidental fall which accelerated pre-existing diabetes to a fatal termination. The board in consideration of the medical testimony found that diabetes mellitus may be originally caused by traumatism or shock, or if the disease is present it may be accelerated or aggravated by such means.

A porter in a New York piano factory was afflicted with diabetes. A heavy box fell upon and bruised his feet. Gangrene ensued which was accelerated by the diabetes so that it became necessary to amputate his leg. An award by the commission was affirmed by the Appellate Division of the Supreme Court.[6]

Diphtheria

Where an employee contracted diphtheria five days after an injury and the course of the disease was concurrent to and com-

[1] *Williams* v. *Missouri Bridge & Iron Co.* 180 N. W. 357.
[2] *Geizel* v. *Regina Co.* 114 Atlantic 328.
[3] *Balzer* v. *Saginaw Beef Co.* 165 N. W. 785.
[4] *Walker* v. *Lehigh Valley Railroad.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 2, p. 531.
[5] *Smithgall* v. *State Workmen's Insurance Fund.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 125.
[6] *Cain* v. *Technola Piano Co.* New York. Department of Labor. Special Bulletin No. 106, p. 204.

plicated the disability due to the accident, a Minnesota Court[1] allowed compensation only for the period that such an injury would ordinarily disable the man. The effects of the diphtheria were ignored.

Dizziness

Dizziness resulting from strain in heavy lifting was held an accident and compensation allowed by the Pennsylvania board during the period of continued dizziness.[2]

Exhaustion

Exhaustion of physical or mental energies was not a personal injury according to the Massachusetts board[3] where disability was caused by zealous application to his work, the employee often taking work home with him at night.

Glanders

Glanders developing from inhalation of germs while leading an infected horse was held not an accidental injury by the New York Supreme Court.[4] The opinion pointed out that the disease resulted from toxins produced by bacteria within the body and the cause is native, not foreign to the body, and unless there was an accidental means or occurrence involved in the inception of the disease it was not within the workmen's compensation act. The contrary opinion was held in a Massachusetts case[5] where a hostler contracted glanders from a diseased horse. The court said:

> "It is plain that [the employee] suffered bodily injury in consequence of becoming infected with glanders as much so as if he had a leg or arm broken by a kick from a vicious horse."

Compensation was allowed. It is interesting to note that New York, Minnesota and Ohio have listed glanders in the schedules of occupational diseases which are compensable under their acts.[6]

Hydrophobia, or Rabies

A dog catcher in the performance of his duties was bitten on the hand by a rabid animal, and later died from hydrophobia.

[1] *Johnson* v. *Erickson*. Minnesota. Department of Labor and Industries. Bulletin No. 17, p. 84.
[2] *Meyers* v. *Meyers*. *Weekly Underwriter*. Vol. 100, No. 17, April 26, 1919, p. 641.
[3] *Marsden* v. *McKenzie and Winslow*. *Weekly Underwriter*. Vol. 101, No. 1, July 5, 1919, p. 31.
[4] *Richardson* v. *Greenburg*. 176 N. Y. Supp. 651.
[5] *Hood* v. *Maryland Casualty Co*. 206 Mass. 223.
[6] See p. 243 *et seq.*

The Pennsylvania board[1] awarded compensation to his dependents.

Meningitis

Meningitis, which medical testimony claimed was due to inflammation of the submaxillary gland caused by infection from an acid burn, was compensated in New Jersey.[2]

Miscarriage

Miscarriage caused by a strain was not compensated in Connecticut,[3] because no serious results followed. Medical testimony also showed that the fœtus had been dead for several days before the accident occurred.

Nephritis

Exposure causing nephritis was held to be an accidental injury in an Indiana case.[4] A paper mill employee was obliged to flush out a large quantity of hot paper pulp which had escaped from a broken pipe into the basement of the factory. In doing this work, which required several hours, he became excessively heated and damp, and in going home to dinner he became chilled. Nephritis developed later. In its opinion the court said:

> "In the instant case it is clearly apparent that appellee contracted the disease which caused the disability for which he seeks compensation, as the direct result of an unusual circumstance connected with his employment. His duties required him to keep the basement room clean, but this did not ordinarily require him to flush hot steaming pulp into the sewer with hot water from the exhaust of the engine. It is evident that this was only required when the iron pipe through which such pulp was conducted broke and allowed it to escape to the floor. Hence the industrial board may have very properly found that the breaking of the pipe created an unusual condition under which appellee was required to work at the time in question, resulting in enforced exposure. In such event, any disease, of which such exposure is shown to have been the cause, may properly be said, under the rule stated, to constitute a personal injury by accident, and to come within the provisions of the workmen's compensation act of this state."

In New York,[5] however, the board refused to grant death

[1] *Ellis* v. *City of New Castle*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 343.

[2] *Cesare* v. *duPont de Nemours*. *Weekly Underwriter*. Vol. 105, No. 11, Sept. 10, 1921 p. 475.

[3] *Vitale* v. *Winchester Repeating Arms Co*. *Weekly Underwriter*. Vol. 100, No. 9, March 1, 1919, p. 323.

[4] *United Paper Board* v. *Lewis*. 117 N. E. 276.

[5] *Price* v. *Public Service Commission*. New York. Department of Labor. Special Bulletin No. 97, p. 185.

benefits in the case of an inspector who fell into water and whose death from chronic interstitial nephritis nine months later was alleged to have been caused by the immersion. The Minnesota Supreme Court[1] affirmed an award where acute nephritis developed from an accidental fall.

Prolapsus Uteri

Prolapsus uteri brought on by heavy lifting was held a compensable disability in California.[2]

Rheumatic Fever

Rheumatic fever has been compensated in Massachusetts.[3] In this case the employee was peculiarly exposed to drafts and cold, and developed an abscess in her ear. Thereafter she was affected with rheumatic fever. The board held that the employee was subject to a greater risk than the community at large, because of conditions under which she was forced to work; and the disability was therefore occasioned by an accident arising out of and in the course of employment.

Rheumatism

Rheumatism from the strain of shifting a heavy barrel was held to be compensable in New York,[4] but the case was dismissed upon appeal because the law did not cover the employment.

Scarlet Fever

An ambulance driver who had transported scarlet fever patients in his ambulance contracted scarlet fever, which was held by the California commission[5] to be a compensable injury as the result of a special exposure. This is in keeping with the decisions of the same commission in the case of the *City and County of San Francisco* v. *Industrial Commission*, noted on page 141, and that of *Haines* v. *Laun Hardware Company*, decided by the Wisconsin commission and noted on page 168.

Sciatica

Sciatica, an inflammation of the sciatic nerve, caused by

[1] *State ex rel Maryland Casualty Co.* v. *District Court of Hennepin County*. 167 N. W. 1039.
[2] *Bart* v. *Cohn Goldwater Co.* California. Industrial Accident Commission. Decisions. Vol. 5, p. 241.
[3] *Curry* v. *Glove Yarn Co. Weekly Underwriter*. Vol. 103, No. 8, Aug. 21, 1920, p. 843.
[4] *Walsh* v. *Woolworth Co.* 167 N. Y. Supp. 394.
[5] *Zehender* v. *Davis*. California. Industrial Accident Commission. Decisions. Vol. 8, p. 180.

lifting bars of bullion, was considered by the Utah commission[1] as an accidental injury and the employee was awarded compensation.

Sleeping Sickness

Sleeping sickness was held to be not compensable in a New York case[2] because no connection between the disease and injury was proven. Medical testimony disclosed that this disease was the result of some infection and the infection could not result from a mere bump on the head such as the employee had received.

Smallpox

Smallpox was held a hazard of the employment and compensated in a Wisconsin case.[3] Here an electrician was employed to wire a house in which there was a sick child from whom he contracted the disease. A Minnesota court, on the contrary, refused death benefits in a smallpox case[4] holding:

> "That the contracting of smallpox is not an event happening suddenly and violently nor does it produce at the time any injury to the physical structure of the body."

Spotted Fever

A workman in Idaho suffered from spotted fever as a result of a tick bite. He was unable to establish the time of the occurrence and because the character and nature of his work as a miner did not expose him to the bite of this insect, compensation was denied.[5] Another case[6] of tick bite in the same state was compensated because the claimant in his occupation as a sheep herder was regularly exposed to the bite of this insect. Tick bite resulting in spotted fever was held a compensable injury in California[7] where a hunter, employed by the state to exterminate coyotes, was obliged to travel through wild country and became specially exposed to the bite of the tick.

[1] *De Haan* v. *American Smelting Co.* Utah. Industrial Commission. Report of Decisions. 1918–1920, p. 92.
[2] *Donovan* v. *Alliance Electric Co.* 186 N. Y. Supp. 813.
[3] *Haines* v. *Laun Hardware Co.* Wisconsin. Industrial Commission. 9th Annual Report, p. 64.
[4] *Poirer* v. *Minnesota Utility Co.* Minnesota. Department of Labor and Industries. Bulletin No. 17, p. 92.
[5] Case of J. R. Gillispie, No. 10788. Idaho. Industrial Accident Board. 2nd Report, p. 65.
[6] Case of A. E. Leach, No. 11396. Idaho. Industrial Accident Board. 2nd Report, p. 67.
[7] *Adams* v. *State of California.* California. Industrial Accident Commission. Decisions. Vol. 4, p. 62.

Strained Muscles

Strained muscles on the right side caused by heavy lifting was an accidental injury and compensated in a Wisconsin case.[1] The undue strain was a mishap which resulted in muscular spasm and consequent disability.

Tetanus

The Supreme Court of New York[2] affirmed an award to the widow of a driver who ran a rusty nail in his foot while collecting dirt from the streets and died from tetanus; also to a wool sorter who contracted tetanus from hides and died.[3] The germs presumably found their way into his body through cracks in his hands due to eczema.

Likewise in Connecticut[4] compensation was awarded the dependents of an employee who stepping on a wire, punctured the sole of his foot, and died later from tetanus infection. The commissioner, 3rd District, awarded death benefits on the theory that the employment, being responsible for the wound, was also responsible for its natural consequences.

Tuberculosis

While the discussion of tuberculosis as a result of accident might be introduced at this point it has been thought better to group all the tuberculosis cases in one chapter and the discussion of this subject will, therefore, be found on page 194.

Xanthoma Tuberosum

An employee whose disability was diagnosed as xanthoma tuberosum, "a systematic disease very rare in its character and developing a multiple of subcutaneous tumors" claimed compensation because his condition resulted from contusions and bruises at the base of his thumb. A Minnesota court[5] held that the disability did not arise from any accidental injury and the claim for compensation was dismissed.

[1] *Bystrom* v. *Jacobson*. 155 N. W. 919.
[2] *Putnam* v. *Murray*. 174 App. Div. 720.
[3] *Hart* v. *Wilson & Company*. Affirmed, 186 App. Div. 926. New York. Department of Labor. Special Bulletin No. 97, p. 192.
[4] *Butkewicz* v. *American Steel & Wire Co*. *Weekly Underwriter*. Vol. 99, No. 25, Dec. 21, 1918, p. 926.
[5] *Green* v. *Powers Mercantile Co*. Minnesota. Department of Labor and Industries. Bulletin No. 17, p. 85.

XXIV

LATENT DISEASE

The previous state of health of an injured man is not a defense against liability in workmen's compensation cases. Inasmuch as the employer takes the workman as he finds him, he is liable for all the direct consequences of an injury or accident, including the aggravation and acceleration of a pre-existing disease. This rule is general throughout the several states, except Kentucky and California, which specify in their acts that no compensation shall be paid for such part of disability as may be due to pre-existing disease.

The principal argument against compensation for injuries aggravated by latent disease is that since the harm to the employee is not wholly the effect of the work but comes in a large part from a previous weakened condition, there should be no award for compensation or it should be restricted to that part of the injury which results directly from the accident, and the part of the injury which flowed from the previous condition should be excluded. The leading case[1] in this country arose in Massachusetts and is followed in practically all jursidictions. In reply to the above argument it was held that:

> "The Act makes no provision for such analysis or apportionment. It protects the employee. There is nothing said about the production being confined to the healthy employee. The previous condition of health is of no consequence in determining the amount of relief to be afforded. It has no more to do with it than his lack of ordinary care or the employer's freedom from simple negligence. It is a most material circumstance to be considered and weighed in ascertaining whether the injury resulted from the work or from disease. It is the injury arising out of the employment, and not out of the disease of the employee, for which compensation is to be made. Yet it is the hazard of the employment acting upon the particular employee in his condition of health, and not what that hazard would be if acting upon the healthy employee or upon the average employee. The act makes no distinction between wise or foolish, skilled or inexperienced, healthy or diseased employees. All who rightly are describable as employees come within the act."

This rule is further established in an Illinois case,[2] where an

[1] *In re Madden.* 111 N. E. 379.
[2] *Big Muddy Coal and Iron Co.* v. *Industrial Board.* 116 N. E. 662.

employee affiicted with a tumor, which was accelerated and aggravated by an injury, was compensated in full for resultant disability. It would be impossible to ascertain what portion of incapacity was due to the tumor and what portion was due to the accident. The fact that the compensation covered an impaired physical condition which prevented recovery from accident was also held to be immaterial. Similarly in Indiana[1] the court held that:

> "an occurrence which merely hastens an existing disease to its final culmination will be deemed an accident within the meaning of the Workmen's Compensation Act, and where such occurrence arises out of and in the course of employment compensation will be awarded."

A late Illinois decision[2] makes a change from the ruling noted above in *Big Muddy Coal & Iron Co.* v. *Industrial Board* and the Supreme Court of that state now clearly differentiates between a condition resulting from pre-existing disease and the effect of the injury, holding that:

> "If an injury sustained is the proximate cause of the incapacity for which compensation is sought, the previous physical condition of the employee is unimportant, and he may recover for permanent incapacity which results from an accident independent of pre-existing disease. He is not entitled to compensation for a condition resulting from a pre-existing disease and not from an injury suffered in the course of employment and arising out of it. If there is a pre-existing disease, the employee is entitled to recover for all consequences attributable to the injury in the acceleration or aggravation of such disease. Such aggravation or acceleration, permanent and progressive in its nature, will entitle the employee to compensation to the extent and in the proportion in which the pre-existing disease is increased or aggravated."

The statutory provisions of the California act which relate to latent disease are as follows:[3]

> "In case of aggravation of any disease existing prior to such injury, compensation shall be allowed only for such proportion of the disability due to the aggravation of such prior disease as may reasonably be attributed to the injury."

In interpreting this part of their law the California commission allows full compensation where the disease is latent and the injury creates an entirely new activity; but where the disease is active at the time of injury and its progress is accelerated thereby, the responsibility will be apportioned. To illustrate: an employee was struck on the knee and lameness induced him

[1] *Utilities Coal Co.* v. *Herr.* 132 N. E. 262.
[2] *Springfield District Coal Mining Co.* v. *Industrial Commission.* 132 N. E. 752.
[3] Laws of 1919. Chap. 471, Sec. 3, Par. 4.

to consult a physician. The examination revealed sarcoma of the bone at the knee, which necessitated amputation just above the knee. The preponderance of medical evidence was to the effect that the sarcoma existed at the time of injury and would in all probability within a relatively short time have necessitated the amputation of the leg even in the absence of the injury. It was held[1] that the disability should be apportioned between the pre-existing condition and the injury and that the portion attributed to the injury was adequately covered by an award for medical expenses without disability indemnity.

It would seem, however, that in addition to the California law noted previously, Kentucky by statutory provision[2] and Illinois by court decision, *supra*, are the only states which apportion the awards when an active pre-existing disease is aggravated by an injury. In other states the rule established in the Madden case, *supra*, controls the awards of the courts and commissions.

Cancer

From the medical point of view, it is of interest to note that practically all industrial commissions and courts when considering injuries involving morbid or malignant growths refer to the condition as "cancer." There is little or no effort made to differentiate true cancer from other forms of malignancy. From the standpoint of etiology and treatment, this differentiation is of importance, but from the compensation standpoint, it is of secondary consideration, as the results are the same in that the worker is incapacitated and thus entitled to compensation payments in any case.

It has been the experience of surgeons when treating fractures and other bone and joint injuries that do not respond to the usual methods of treatment, to find at times that a malignant growth at or near the point of injury is the cause of the delay. These growths antedate the injury by a considerable period of time, although they may have produced no symptoms until the injury occurred. This fact is recognized by compensation boards and commissions in dealing with cases involving this question. In such cases compensation is usually awarded for the aggravation of a pre-existing disease.

[1]*De Vilbiss* v. *De Vilbiss*. California. Industrial Accident Commission. Decisions. Vol. 8, p. 230.
[2]Acts of 1916. Chap. 33, Sec. 1.

In compensation cases, in order to establish that the disease is aggravated because of the employment, it is necessary to show that the employee received an injury. This was the ruling in a Kentucky case[1] where the employee was struck on the right leg. A cancer developed at the seat of injury and amputation of the leg was necessary. Award was made for loss of the leg because the injury was the exciting cause of the cancer. A similar ruling was made by the New York board where an employee fell and fractured the right femur at the extreme lower end. As cancer developed at the site of injury the leg was amputated at the middle of the thigh. This award, however, was reversed by the Supreme Court[2] because it was established by medical testimony that cancer was pre-existing at the point of fracture and, had it been absent, amputation would not have been necessary and the fracture would have healed.

On the theory that cancer, to be aggravated as a result of accident, must develop at the place of injury, compensation for death was refused in a Massachusetts case[3] in which the employee was struck by a timber in the small of his back and later died from carcinoma of the stomach. The board found

> "that the external violence in this case was too remote to be a factor in producing or aggravating a growth located at the cardiac end of the stomach, this portion of the stomach being so protected as to make it improbable that the blow, or injury, such as it is claimed the employee received, caused a condition of cancer. The weight of the evidence shows that, by reason of the early development of symptoms of obstruction, the growth must have been present at the time of the accident, and that it pursued the usual course of an obstructing cancer in this position.... There was no direct violence over the stomach, or in the region of the growth; therefore direct violence was not a possible factor in the development or acceleration of said growth."

However, the same commission[4] under unusual circumstances, allowed an award where traumatism to the site of the malignant growth was not an element for consideration. The employee was fatally affected with cancer of the liver and the bile duct was already practically closed. While driving a truck, through

[1] *Parten* v. *Union Tanning Co.* Kentucky. Workmen's Compensation Board. Leading Decisions. 2nd Report, p. 110.

[2] *Brady* v. *Holbrook Cabot and Rollins.* 178 N. Y. Supp. 504.

[3] *McElligott* v. *Frankfort General Insurance Co.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 2, p. 527.

[4] *Driscoll* v. *Blacker & Shepard. Weekly Underwriter.* Vol. 103, No. 1, July 3, 1920, p. 33.

a collision he was thrown to the ground and as a result his vitality was lowered and he was unable to resist the poisonous effect of the bile in his system. It must be noted, however, that the commission considered not how the injury affected the growth of cancer, but that it did affect the employee's resistance to poison which, because of the disease, affected his system.

An interesting point brought out by the preceding case was the fact that, at the time of accident, the employee was fatally affected and that death from the disease was a matter of a short time. The commission, however, was not interested in what degree the accident tended to shorten the victim's life, but the fact that the accident did shorten his life was sufficient reason for sustaining an award for compensation for a fatal injury.

The practice in Illinois,[1] California[2] and Kentucky[3] is opposed to this ruling of the Massachusetts board. In these states, when an injury occurs to a worker with an active malignant growth that is further activated by the injury, compensation is awarded proportionately to the amount of the disability due to the injury and that due to the disease.

The question arose in a New Jersey case[4] as to whether death was due to injury or to the progress of the cancer. The employee was engaged in furrowing posts in a wood-working shop. In order to accomplish his work it was necessary to push the posts forward against the knives of the machine by pressing his abdomen against the end of the posts. In so doing, he ruptured a pre-existing internal cancer. In sustaining the award the New Jersey Supreme Court held:

> "the trial court was fully justified in finding that the rupture occurred while the deceased was doing some unusually heavy work. So that even if deceased was suffering from internal cancer, it was quite within the province of the court to find that the proximate cause of death was the unusual and forcible pressure on parts weakened by disease, which but for the unusual strain would have held out for a considerable period."

In a similar case[5] an award was made to dependents of an employee by the Pennsylvania board. The employee was struck

[1] *Springfield District Coal Mining Co.* v. *Industrial Commission*. 132 N. E. 752.
[2] Laws of 1919. Chap. 471, Sec. 3, Par. 4.
[3] Acts of 1916. Chap. 33, Sec. 1.
[4] *Voorhees* v. *Smith Schoonmaker Co.* 92 Atlantic 280.
[5] *Boley* v. *Pennsylvania Railroad*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 419.

in the abdomen by the lever of a bolt machine and incapacitated about a week. Four months later he was obliged to stop work and a medical examination revealed carcinoma of the liver in an advanced stage. Two months later he died. According to physician's testimony the cancer was of slow growth and its progress was accelerated by the blow.

The Supreme Court of California affirmed an award[1] for compensation in the case of a workman who fell, after which cancer developed at the site of injury.

Likewise the Pennsylvania Supreme Court, in a case[2] where an employee's face was injured by an explosion, held that a hitherto unrecognized cancer on his face was changed to an actively growing cancer by the accident, because the beginning of the rapid growth was coincident with the accident. It was held that the accident aggravated a pre-existing disease and resulted in death. But in New York where the employee slipped on a piece of brass and injured his back, there was no award[3] for cancer of the throat, as the causal relation between accident and disease could not be established. Also in a Michigan case[4] where cancer developed about three years after an accident in which the employee was affected with blood poison, death was not held to be due to the accident, according to evidence submitted.

Death from lymphosarcoma was compensated in Wisconsin[5] as being the proximate result of an accident. The employee was struck over Poupart's ligament on the left side. The blow caused some discoloration of the surrounding tissue and raised a swelling which in two months grew to the size of an egg and caused considerable pain. The tumor was then removed by operation, but other nodules developed on his chest and abdomen which were removed but reappeared and the employee died within six months of the accident. Medical testimony revealed that the employee suffered from lymphosarcoma and there was considerable difference of opinion expressed regarding the disease being produced by trauma. However, because the attending physician and surgeon gave it as his opinion that the sarcoma could have been produced by the accident, the com-

[1] *Santa Ana Sugar Co.* v. *Industrial Accident Commission.* 170 Pacific 630.
[2] *Whittle* v. *National Aniline & Chemical Co.* 109 Atlantic 847.
[3] *Magee* v. *Pennsylvania Railroad.* New York. Department of Labor. Special Bulletin No. 97, p. 186.
[4] *Ortner* v. *Zenith Carburetor Co.* 175 N. W. 122.
[5] *Keutbach* v. *Washington Cutlery Co.* Wisconsin. Industrial Commission. 6th Annual Report, p. 42.

mission considered itself warranted in awarding compensation to the dependents.

Falls Due to Latent Disease

Many courts are of the opinion that should loss of consciousness or self-control from physical weakness because of an exposure of the employment result in injury, such injury is due to the accident and not to the disease. Such was the decision by the Massachusetts Supreme Judicial Court[1] where an employee fell against machinery and received an injury, which severed the carotid artery. The autopsy disclosed that the employee was in the last stages of tuberculosis and it was claimed his physical condition brought on the fall. The court, however, affirmed the award, saying that the real question was not so much the cause of the fall, but whether the risk and harm of a fall into or upon machinery then in use by the employee were incidents of a business and hazards to which the workman would have been exposed apart from that business.

A hack driver, helpless from dizziness occasioned by disease, was pitched from his seat by the motion of the hack which he was driving. The Superior Court of Rhode Island held[2] he was entitled to compensation for injuries caused by the fall, since his fall was an accident arising out of his employment. The evidence showed that the fall from the vehicle was due to a positive pitching of the driver from his seat and not the result of a mere collapse of an unconscious man.

The New Jersey commissioner[3] has adopted the same principle of law in a case where the driver of a truck, during an epileptic fit, lost control of his machine and collided with a tree. As a result he lost the sight of one eye. Compensation was awarded because he was exposed by his employment to a special hazard, which otherwise he would not have been called upon to meet.

In Massachusetts[4] an ill employee, while retiring to a rest room, because of weakness fell against the glass panel of a door and severed an artery, dying from the hemorrhage. Here the illness which caused the fall was considered the remote cause of her death and the fall through the glass door the dominant and proximate cause of the injury. Compensation was accordingly awarded her dependents.

[1] *In re Dow.* 121 N. E. 19.
[2] *Carroll* v. *What Cheer Stable Co.* 96 Atlantic 208.
[3] *Mallette* v. *Warner. Weekly Underwriter.* Vol. 102, No. 18, May 1, 1920, p. 803.
[4] *Sullivan* v. *Jordan Marsh Co. Weekly Underwriter.* Vol. 101, No. 1, July 5, 1919, p. 31.

The same rule was applied in an Indiana case[1] where an employee, during an epileptic seizure, fell into a tank of water and was drowned. The court said:

> "It does not follow that the cause of his death was the disease. Had it not been that his employment required him to work at or near the opening of the tank, the epileptic fit may not have resulted in death."

Likewise an employee in a fit fell into an ashpit and was badly burned by hot coals. The Illinois Supreme Court held[2] death was not due to epilepsy or pre-existing disease but to burns received in the fall and the employer was liable even though the fall might have been caused by a pre-existing disease.

The New York court[3] reversed an award made by the commission where the facts were identical to those of the Indiana case cited above. Here a servant, also subject to fits, fell into five feet of water and was drowned. Death was not considered an accident arising out of the employment, the inference being that the employee was overcome by an attack of his constitutional malady. Similarly the same court[4] denied compensation to an employee who, during a dizzy spell, put his hand on a stove for support and was burned, holding that such an injury was due to disease and not to the employment. Resembling this case is one in Kansas[5] where an epileptic was burned by falling against hot pipes. Compensation was refused because the injury followed the epileptic seizure and his employment did not contribute in bringing on the fit. The court added, in its opinion, that if his labor had aided in provoking the seizure, then it could have been said that the injury arose out of the employment.

A large number of accidents arise from a workman becoming unconscious while working on a scaffold or in an elevated position. The distance of the fall has been material in deciding the question whether injuries result from disease or accident. This matter is discussed by a Pennsylvania court[6] and the reason for the award expressed as follows:

> "It is probable that epileptics falling only to the level upon which they were standing have received injuries from which they died. But it is very rare that such injuries are inflicted where the epileptic only falls to the floor upon which he is

[1] *Miller* v. *Beil.* 127 N. E. 567.
[2] *Rockford Hotel Co.* v. *Industrial Commission.* 132 N. E. 759.
[3] *Minerly* v. *Kingsbury Construction Co.* 191 App. Div. 618.
[4] *Neuberger* v. *Third Ave. Railway Company.* 192 App. Div. 781.
[5] *Cox* v. *Kansas City Refining Co.* 195 Pacific 863.
[6] *Feltenberger* v. *Union Ice Co.* 1 Mackey 259.

standing. If he received the injury from which he died because of his fall from an elevated position and his presence in that elevated position was occasioned by the work which he had to do, then I take it that his death came from an injury while engaged in the furtherance of his employer's business and that he comes within the provision of the Workmen's Compensation Act. It is true, as counsel for the defendant has said, that some place between the case of a man sitting in a chair at work and falling out of that chair dead from heart disease or epilepsy and the case of a man falling from a scaffold thirty-nine feet high, a line must be drawn. But after a careful examination of the case, I am of opinion that wherever that line may be drawn, this case is on the side of the rule that the fall (four feet) and not the disease is the proximate cause of his death."

In Connecticut, a painter, subject to attacks of indigestion causing unconsciousness, fell from a scaffold and was killed. The Supreme Court[1] affirmed an award for compensation because the danger of falling and the liability of resulting injury was a risk arising out of the conditions of his employment. Another painter in Indiana[2] fell from a ladder and the court found that the

"fall as a result of vertigo would not in all probability have caused death or serious injury, had it not been that at the time by reason of his employment he was standing on a ladder."

Compensation was awarded in a New York case[3] in which a bricklayer fell fifteen feet from a pile of bricks. It was emphasized in this case that the workman was in good health and that the fall was due to dizziness caused by his elevated position. The decision also inferred that if an attack of epilepsy or heart trouble, a disease inherent in the man, had preceded the fall, it would not have been considered an accident. The New York courts, however, have adopted a broader view than expressed in this case and in *Minerly* v. *Kingsbury Co.* and *Neuberger* v. *Third Ave. Railway Co.* reported above. Compensation awards have been approved by the New York Supreme Court where a plasterer fell from a scaffold about ten feet high,[4] and where a foreman fell from a stoop three feet high.[5] It must be noted that in these cases the insurance carriers argued the defense that the accidents were due to epilepsy, etc., causes other than

[1] *Gonier* v. *Chase Companies*. 115 Atlantic 677.
[2] *Board* v. *Shertzer*. 127 N. E. 843.
[3] *Santaroce* v. *Sag Harbor Brick Works*. 169 N. Y. Supp. 695.
[4] *O'Rourke* v. *McNulty*. Affirmed, 186 App. Div. 925. New York. Department of Labor. Special Bulletin No. 97, p. 133.
[5] *Marland* v. *Smith & Pearson*. Affirmed, 188 App. Div. 942. New York. Department of Labor. Special Bulletin No. 97, p. 133.

high position, while the attorney general's contention, as upheld by the court, maintained that even though these accidents were due to disease, they were compensable because of the unusual risks of the position.

Compensation has been denied in Michigan,[1] where an employee fell from a scaffold only a few feet from the floor, on the theory that epilepsy caused the fall and the disease was responsible for the results of such a fall. The distance of the fall, it was held, would not change the liability of the injury.

> "The distance of the fall might contribute to the extent of the injury but it was not a contributory cause of the fall. When the deceased was seized with the epileptic fit, he would have fallen no matter where he was and the employer cannot be held responsible because the unfortunate seizure occurred when the workman was on a scaffold."

This decision is in agreement with one in California where a worker who was subject to epileptic fits and who was employed on a scaffold properly guarded by a rope, fell and died. The Supreme Court held[2] that the proximate cause of his death was the epileptic fit, with which the employment had no connection.

In Massachusetts compensation was denied in a case[3] where there was no fall from an elevated position nor against dangerous machinery, etc., but simply a collapse. The man was working at a table and fell to the floor "like a log," sustaining a slight scalp wound. It was held that apoplexy caused the fall and that the effect of the fall was not of sufficient severity to aggravate the pre-existing condition.

A similar decision[4] by a Connecticut commissioner, 5th District, held that had the epileptic fallen into moving machinery or other danger on account of its proximity to his employment, the cause would have been one for compensation; but the mere collapse of the man while working at his bench and the injury of a dislocated shoulder, received when friends tried to prevent his fall, could not be attributed to the employment.

A New York case[5] is interesting from its sequence of events. An employee working on a pile of bricks four to five feet above the ground was seized with an epileptic fit and fell to the ground. The fall fractured a rib, which punctured his lung, and pneu-

[1] *Van Gorder* v. *Packard Motor Car Co.* 162 N. W. 107.
[2] *Brooker* v. *Industrial Accident Commission.* 168 Pacific 126.
[3] *In re Cripps.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 4, p. 606.
[4] *Allard* v. *Ingersoll & Bro.* Connecticut. Compensation Decisions. Vol. 2, p. 274.
[5] *De Vos* v. *Rochester Brick & Tile Co.* New York. Department of Labor. Special Bulletin No. 97, p. 134.

monia developed, causing death. The award was made because the fall was a hazard of his employment.

While driving a logging team, an employee suffered an epileptic fit, fell in front of the truck, was run over and killed. The Montana board held[1] that because the employer had knowledge of the workman's tendency to epileptic fits and permitted him to be placed in a position where such a fit would result seriously or fatally, he must assume responsibility for the consequences.

Heart Disease

Over-exertion and excitement at critical moments stimulate the heart action, and where the heart is previously weakened by disease, death often results. Compensation is generally allowed in cases of physical over-exertion; but the courts and commissions are not in agreement as to cases where the result is due to mental activity, nervous strain or excitement. The trend at present, however, is to exclude compensation for this latter group on the theory that the element of accident is lacking.

The Supreme Court of Michigan[2] awarded compensation to a night watchman, advanced in years and troubled with heart disease who, while making his rounds discovered a fire, and through the excitement of giving warning and attempting to extinguish it became exhausted and died. His death was held as due to accidental injury. The Michigan Industrial Board,[3] however, denied compensation for death where no physical exertion, but excitement and nervous shock alone, superinduced by heart disease, resulted in death.

The New York Supreme Court, Appellate Division, has sustained awards in a case of death from heart disease rendered acute by strain in lifting,[4] caused or aggravated by amputation following breaking of a leg,[5] and hastened by contusions to a hip due to a fall,[6] and a case where an employee incurred a strain in bending heavy bars.[7] The New York Court,[8] however, refused

[1] *Albree* v. *Mann Lumber Co.* *Weekly Underwriter*. Vol. 102, No. 18, May 1, 1920, p. 802.
[2] *Schroetke* v. *Jackson Church Co.* 160 N. W. 383.
[3] *Visser* v. *Michigan Cabinet Co.* Michigan. Industrial Accident Board. Workmen's Compensation Cases. July, 1916, p. 319.
[4] *Astman* v. *Wackenhut.* Affirmed, 184 App. Div. 918. New York. Department of Labor. Special Bulletin No. 97, p. 184.
[5] *Nolan* v. *Woods.* Affirmed, 184 App. Div. 918. New York. Department of Labor. Special Bulletin No. 97, p. 184.
[6] *Balmer* v. *Wanamaker.* Affirmed, 188 App. Div. 942. New York. Department of Labor. Special Bulletin No. 97, p. 184.
[7] *Uhl* v. *Guarantee Construction Co.* 161 N. Y. Supp. 659.
[8] *O'Connell* v. *Adirondack Electric Power Corp.* 185 N. Y. Supp. 455.

compensation where the chief operator died from acute dilatation of the heart due to nervous excitement while in his office directing by telephone the restoration of electrical current interrupted by a storm. It was held that there was no accident to the deceased and even though the excitement should be termed an accident a full hour elapsed after the so-called accident before he was stricken and therefore a distinct disassociation arose between the two.

However, when excitement is combined with physical exertion, compensation has been awarded[1] by a Connecticut commissioner, 5th District. A chief of police, in capturing two suspicious characters, was obliged to run up a steep grade. After jailing his prisoners and walking to a nearby drug store, he complained of feeling ill and died later the same day. The circumstances aggravating his pre-existing heart trouble were held to be a personal injury within the law.

The Pennsylvania board held[2] that even though the decedent had organic heart trouble, if he suffered a strain which hastened his death, the dependents were entitled to compensation. In this case death resulted after pushing a car on the track and loading a ton of coal therein. A similar award[3] was made by the same commission where death resulted from dilatation of the heart due to over-exertion in heavy employment.

The Supreme Court of Kentucky[4] denied compensation where excitement and hurry caused a diseased heart to fail, because the statute explicitly excludes an award for disease "except where the disease is the natural and direct result of a traumatic injury by accident, nor shall they include the results of a pre-existing disease."[5]

Conditions under which the employee works may aggravate a weak heart. For example, where evidence established that heart trouble was aggravated to a fatal result by the employee's breathing dust-laden air in an enclosed building and that if the same work had been performed in the open air the heart attack would not have ensued, it was held by the Colorado commission[6]

[1] *Robbins* v. *City of Shelton*. *Weekly Underwriter*. Vol. 102, No. 4, January 24, 1920, p. 158.
[2] *Slovinsky* v. *Bess Etta Coal Co*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 348.
[3] *Olson* v. *Dresser Mfg. Co*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 2, p. 237.
[4] *Rusch* v. *Louisville Water Co*. 237 S. W. 389.
[5] Acts of 1916. Chap. 33, Sec. 1.
[6] *Carroll* v. *Industrial Commission*. 195 Pacific 1097.

that death resulted from accidental injury. In another case where the inhaling of chlorine gas affected a chronic heart condition the New York board[1] awarded death benefits.

Although six months elapsed between the time of accident and death from heart disease in a Maine case, the commission ruled[2] that death was due to accident. It appears that prior to the accident the deceased, although never incapacitated from work, was suffering from a heart lesion and had an enlarged heart, and from the time of the accident he was partially or wholly disabled, and death finally resulted. Almost the contrary was held by the Illinois Supreme Court.[3] Here the employee, suffering from myocarditis, an organic disease of the heart caused by infection, was caught between two coal cars and injured in the region of his lower left ribs. The commission held the squeezing aggravated the heart condition and awarded compensation for total and permanent disability. This decision was confirmed by the Circuit Court but reversed by the Supreme Court which was of the opinion that compensation cannot be recovered for a condition that results from a pre-existing disease rather than from an injury suffered in the course of employment.

Strains Causing Hemorrhage

Where an employee suffers from disease of the arteries which suddenly becomes serious or fatal, the question arises in workmen's compensation cases, whether death or injury was caused by the disease progressing naturally, or whether the employee suffered an accident which, combined with the pre-existing malady, produced serious results. The leading English case[4] on this question has established the precedent for many American decisions. In the course of this opinion, Lord Loreburn said:

> "In this case a workman, suffering from an aneurism in so advanced a state of disease that it might have burst at any time, was tightening a nut with a spanner, when the strain, quite ordinary in this quite ordinary work, ruptured the aneurism, and he died. . . . It may be that the work has not, as a matter of substance, contributed to the accident, though in fact the accident happened while he was working. In each case the arbitrator ought to consider whether, in

[1] *McNeil* v. *Carso Paper Co.* *Weekly Underwriter.* Vol. 106, No. 16, Apr. 22, 1922, p. 847.
[2] *Lachance* v. *Skinner Lumber Co.* *Weekly Underwriter.* Vol. 106, No. 20, May 20, 1922, p. 1048.
[3] *Springfield District Coal Mining Co.* v. *Industrial Commission.* 132 N. E. 752.
[4] *Clover Clayton & Co.* v. *Hughes.* (1910) A. C. 242; 3 B. W. C. C. 275.

substance, as far as he can judge on such a matter, the accident came from the disease alone, so that whatever the man had been doing it would probably have come all the same, or whether the employment contributed to it. In other words, did he die from the disease alone or from the disease and employment taken together, looking at it broadly?"

As to whether it "arose out of the employment" he said:

"I do not think I would attach any importance to the fact that there was no strain or exertion out of the ordinary. . . . An accident arises out of the employment when the required exertion producing the accident is too great for the man undertaking the work, whatever the degree of exertion or the condition of health."

The English case is the basis of an Indiana decision[1] wherein a miner, while loading a car of coal, suffered a ruptured aorta, which was in a diseased condition. The court decided that it was an accident arising out of the employment. The English decision is reviewed in a New York case[2] in which an employee afflicted with arteriosclerosis suffered apoplexy as a result of heavy lifting. The court held that it was the strain and effort in lifting, and not the pre-existing disease, that brought about the apoplexy.

The English case is also quoted in a Michigan decision[3] in which the testimony tended to show that the employee was working in a room where the temperature was unusually high, and the heat coupled with over-exertion caused apoplexy. Arteriosclerosis, from which the employee was suffering, was a contributing cause.

Where the strain was caused by vomiting due to inhaling noxious gases, and resulted in rupture of the aorta, compensation benefits were awarded by the Pennsylvania court.[4] The court did not pass upon the question whether the injury arose out of the employment, since it is sufficient under the statute that it happens in the course thereof. It decided, however, that

"the rupture itself occurring from extra effort in vomiting would under the circumstances constitute accidental violence to the physical structure of the body within the broad meaning of that term."

The fact that the deceased had a chronic ailment which rendered him more susceptible to such injury did not defeat the right to compensation.

[1] *Indian Creek Coal Mining Co.* v. *Calvert.* 119 N. E. 519.
[2] *Fowler* v. *Risedorph Bottling Co.* 175 App. Div. 224.
[3] *LaVeck* v. *Parke, Davis & Co.* 157 N. W. 72.
[4] *Clark* v. *Lehigh Valley Coal Co.* 107 Atlantic 858.

The same rule is established in an Illinois opinion,[1] allowing the claim for compensation on account of a workman who died from a ruptured aorta, brought about by an increase of blood pressure through vigorous physical exertion. Likewise in Texas, where the lifting of a can of paint caused a blood vessel to burst in an employee's lung, the court held[2] that there was an accidental injury within the meaning of the law, and the claim that it had burst before, but had healed over and might burst again, was held to be immaterial.

In a Pennsylvania case[3] where the strain of lifting into a wagon a barrel filled with dirt and bricks, resulted in enlargement and aggravation of a pre-existing aortic aneurism, compensation was allowed because of the employee's inability to work thereafter. Where a workman afflicted with the same disease lifted a heavy roll of film, the New York Court[4] considered the lifting of the film was an extraordinary exertion for a man in his condition. Compensation was awarded because death resulted from strain in his work. Strain causing acute aneurism was held an accident and an award for compensation was sustained by the Supreme Court of Indiana.[5]

A high school principal in Milwaukee, while testing applicants for position on the basket ball team, was struck on the head with a ball, rupturing a blood vessel. The resulting death from apoplexy was considered[6] to be due to the accident, although the deceased at the time was suffering from arteriosclerosis. The Supreme Court of Minnesota[7] sustained an award in which the injury contributed to the apoplectic stroke. In an accident three fingers were cut off and medical testimony showed that the injury was such a severe shock that apoplexy developed.

In a leading case, the Kansas court[8] awarded compensation to the dependents of a workman who suffered fatal pulmonary hemorrhage while breaking rock in a quarry. It was held that inhalation of the dust of a cement mill for three years had impaired his lungs and a recent recovery from typhoid fever had left him in a weakened condition. The court held that:

[1] *Baggot Co.* v. *Industrial Commission.* 125 N. E 254.
[2] *S. W. Surety Co.* v. *Owens.* 198 S. W. 662.
[3] *Rodebeck* v. *Borough of Knoxville.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 212.
[4] *Gorton* v. *Eastman Kodak Co.* 181 App. Div. 909.
[5] *In re Haskell and Barker Car Co.* 117 N. E. 555.
[6] *City of Milwaukee* v. *Industrial Commission.* 151 N. W. 247.
[7] *State ex rel Taylor* v. *District Court of Ramsey County.* 179 N. W. 217.
[8] *Gilliland* v. *Cement Co.* 180 Pacific 793.

"It is not material that the workman's blood vessels were weakened by disease, or that he was disposed to hemorrhage because, for example, he had breathed the dust of the sacking department for three years. The statute establishes no standard of health for workmen, entitling them or their dependents to compensation, and if the added factor of physical exertion in the employment were required to effect the lesion, and did so, the injury arose out of the employment."

However, the Ohio commission[1] held that a stroke of apoplexy occurring in the course of employment not occasioned or contributed to in any way by unusual effort or strain but solely on account of a diseased condition, arteriosclerosis, is not a compensable injury. A similar finding was made by the Wisconsin commission[2] where a village marshal died of ruptured aneurism while taking teamsters to task for leaving horses standing uncovered for a long time in extremely cold weather. The occurrence was held to be similar to death coming while sitting at his own table or performing any of the ordinary duties of life, and compensation was denied his dependents. Similarly in Michigan,[3] a workman was lifting a weight of 150 lbs. breast high when he succumbed to a chronic heart trouble, and compensation was denied because there was no evidence of mischance or miscalculation in lifting the weight and because the disease was of long standing so that any exertion might have resulted fatally.

The Pennsylvania board[4] granted compensation in a case where the heavy lifting caused hemorrhage of the stomach and bowels. The New York Supreme Court[5] approved a compensation award to a workman who died as the result of heart dilatation caused by strain in bending heavy bars. Likewise, a heart dilatation, coming on suddenly to a workman while wheeling a heavily loaded wheelbarrow over soft ground, was held to be a compensable accident by a Connecticut commissioner,[6] 1st District. Compensation was also granted in Pennsylvania[7] where a cerebral hemorrhage resulted from extra exertion in moving a car of coal. Strain from over-exertion in

[1] *In re Harris*. Ohio. Bulletin of the Industrial Commission. Vol. 1, p. 101.
[2] *Flint* v. *Village of West Milwaukee*. *Weekly Underwriter*. Vol. 99, No. 11, Sept. 14, 1918, p. 391.
[3] *Stombaugh v. Peerless Wire Fence Co*. 164 N. W. 537.
[4] *Zukowsky* v. *Philadelphia & Reading Coal & Iron Co*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 185.
[5] *Uhl* v. *Guarantee Construction Co*. 161 N. Y. Supp. 659.
[6] *Gilbert* v. *Whitrock Coil Pipe Co*. Connecticut. Compensation Decisions. Vol. 3, p. 357.
[7] *Mance* v. *Harrison & Walker Refractories Co*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 421.

handling a twenty-pound hammer in a quarry caused apoplexy in a workman and death was held an accidental injury and compensable under the Minnesota act.[1] In Pennsylvania a workman suffered from hemorrhage of his right lung, there being no history of tuberculosis or other weakness. It was held an accidental injury due entirely to pressure on the chest when the employee was engaged in moving a pusher of coal.[2]

Syphilis

Latent syphilitic infection plays an important rôle in workmen's compensation cases. Many an accident in which the injury is of ordinary consequence, because of this disease has led to serious results to the workman and a large compensation expenditure by the employer. It frequently prolongs and delays the healing of wounds and union of fractures and often results in paralysis, insanity, blindness, and other serious disabilities.

In a leading case in Michigan,[3] the defendant employer sought to be relieved from further payments on the ground that the period of disability due to the injury had ceased. In the accident the employee's right arm was denuded of skin and the employer claimed that such disability as continued was due to syphilis, which retarded the healing of the injury. The court affirmed the decision of the commission and held—

> "We agree with the Industrial Accident Board that, under the circumstances of this case, the Act does not contemplate any such apportionment of disability as respondents ask for. Assuming that such disability is being prolonged by the disease, there is yet no point at which the consequences of the injury cease to operate. It is the theory of the respondents, not that the consequences of the injury cease, but that they are prolonged and extended. There is no part of the period of disability that would have happened, or would have continued, except for the injury. The consequences of the injury extend through the entire period, and so long as the incapacity of the employee for work results from the injury it comes within the statute, even when prolonged by pre-existing disease."

In an early New York case[4] (1917), all of the disabilities following the accident were not compensated, because they were the development of a pre-existing disease. The employee, slipped while getting off a wagon and fractured his right tibia

[1] *State ex rel Summers* v. *District Court of Stearns County*. 163 N. W. 667.
[2] *Pedron* v. *Colonial Colliery Co*. 2 Mackey 177.
[3] *Hills* v. *Oval Wood Dish Co*. 158 N. W. 214.
[4] *Borgestad* v. *Shultz Bread Co*. 180 App. Div. 229.

just above the ankle. By reason of syphilis, healing of the fracture was prolonged and his vision also became dimmed. An award was made to cover disability due to fracture during its continuance, even though this should be prolonged because of the pre-existing syphilitic condition, but the case was not deemed within the statute in so far as it related to the loss of eyesight. The disease existing prior to the accident did not "naturally and unavoidably" result from the accident and it is the resulting disease or infection that is provided for by the law.

> "The purpose of the Workmen's Compensation Law was not to abrogate the divine law that 'the sins of the father shall be visited upon the sons, even to the third and fourth generation,' but to impose upon certain designated industries, or the product of such industries the burdens of the accidents arising out of such employments."

The principle of law set forth in this case was overruled in a later New York decision[1] (1920), in which the facts were somewhat similar but all the resultant effects of the accident were compensable. Here, the employee, also a driver, fell from his truck and fractured his wrist. Paresis later set in, due to a dormant syphilitic infection. The employer contended that the disease would sooner or later have developed into its present condition and that the disease did not naturally and unavoidably result from the injury. According to the court this was no defense to the claim for compensation, because—

> "It is sufficient if the disease existed at the time of the injury and was thereby accelerated to such an extent as to impair the earning capacity."

The leading case followed by practically all courts today is a Massachusetts case,[2] in which the court said:

> "The material evidence before the committee on arbitration warranted the findings that the employee had a pre-existing constitutional disease, known as syphilis, which, being dormant, left his ability to perform the arduous work for which he was hired unimpaired, and that because of the nature of the accident arising out of and in the course of the employment, his nervous system suffered a shock sufficiently severe to aggravate and accelerate his condition, until general paresis or insanity resulted, depriving him of all capacity for work in the future. The statute prescribes no standard of fitness to which the employee must conform, and compensation is not based upon any implied warranty of perfect health, or immunity from latent and unknown tendencies to disease, which may develop into positive ailments, if incited to activity

[1] *Finkleday* v. *Heide*. 193 App. Div. 338.
[2] *In re Crowley*. 111 N. E. 786.

through any cause originating in the performance of the work for which he is hired.

"What the legislature might have said is one thing, what it has said is quite another thing, and in the application of the statute the cause of partial or total incapacity may spring from and be attributed to the injury just as much where undeveloped and dangerous physical conditions are set in motion producing such results, as where it follows directly from dislocations, or dismemberments, or from internal organic changes capable of being exactly located."

The Pennsylvania board[1] awarded compensation to a teamster who had suffered frost bite, resulting in gangrene of the feet and their amputation below the knee. The following details of this case are of interest. The claimant, a teamster on a coal wagon, was subjected to a temperature of from 31° to 37° F. during the day on which the accident occurred. He noticed a cold numbing and stinging sensation in his feet about 8 a. m. but continued to work throughout the day, and for two days more. His feet were then badly swollen, gangrene later developing which necessitated amputation of both members below the knee.

When the symptoms of frostbite were first noticed, the claimant "was suffering from a complication of diseases described as arteriosclerosis, syphilis, and cardio-renal disease." On account of conflicting medical testimony, the case was referred to the Board's physician who was of the opinion that

"the conditions in which the claimant worked on that day were such as to induce frostbite which was aggravated by a pre-existing condition of hardening of the arteries, and as a result thereof gangrene set in and amputation had to be performed to remove these gangrenous portions in order to save the man's life."

Where an employee fell and his injury "lighted up" a syphilitic condition, causing paralysis from the waist down, and affecting memory, speech, sight and hearing, the Maine commission[2] held that the disability was the result of the accident.

The same commission made an award where an employee was accidentally cut. The injury, not in itself serious, refused to heal until anti-syphilitic treatment was given. In the opinion of the commission[3] the wound caused the disability, and al-

[1] *Green* v. *B. F. Hill & Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 182.

[2] *Butler* v. *Hyde Windlass Co. Weekly Underwriter.* Vol. 100, No. 13, March 29, 1919, p. 471.

[3] *Christensen* v. *Megquier and Jones Co. Weekly Underwriter.* Vol. 102, No. 16, April 17, 1920, p. 723.

though the pre-existing disease retarded recovery, compensation was due for the entire period of incapacity.

Another important case, decided by the Supreme Court of Louisiana,[1] was appealed on the ground that the employee had a latent case of syphilis, which because of the accident, developed into locomotor ataxia. In the opinion of the court,

> "The evidence leaves no doubt that the plaintiff's phsyical disability resulting from the accident is worse than it would be if he had not been diseased at the time of the accident. But the accident was, none the less, the proximate cause of the present disability. We are not aware of a decision of this court on the subject, but it is well settled in jurisprudence elsewhere that the fact that a person was already afflicted with a dormant disease that might some day produce physical disability is no reason why he should not be allowed damages or compensation for a personal injury that causes the disease to become active or virulent and superinduces physical disability."

Where a workman in apparent good health is suddenly overcome by gas because of a lack of ventilation, it was held by the Minnesota commission to be a personal injury by accident and compensation was not denied because his pre-existing syphilitic condition superinduced the disability.[2]

On the other hand, the Kentucky workmen's compensation act[3] denies compensation for disability resulting from pre-existing disease. The Supreme Court, in conformity with the law dismissed a claim[4] for compensation in a case where a workman was struck on the shoulder by a bale of cotton, leaving no visible injuries, but causing a cerebral hemorrhage and resulting paralysis. The underlying cause of his disability was syphilis and since the latter was a pre-existing disease, the case did not fall within the statute.

In an interesting Iowa case,[5] compensation was awarded to a workman who struck his knee with a hammer. Because of a pre-existing gonorrheal infection the period of disability was prolonged. It was held that—

> "Distinction cannot be made between forms of disease. To hold that gonorrheal infection in the person of a workman would deprive him of compensation in case of accidental injury, establishes a principle which would deny relief to one

[1] *Behan* v. *Honor*. 78 Southern 589.
[2] *Meisel* v. *Swift & Co*. Minnesota. Department of Labor and Industries. Bulletin No. 17, p. 95.
[3] Acts of 1916. Chap. 33, Sec. 1.
[4] *Goodman* v. *Palmer and Hardin*. Kentucky. Workmen's Compensation Board. Leading Decisions. 1st Report, p. 105.
[5] *Hanson* v. *Dickinson*. Affirmed, 176 N. W. 823. Iowa. Workmen's Compensation Service. 3rd Biennial Report, p. 43.

with pre-existing heart trouble whose earning power is lost with accidental injury as the proximate cause."

For further discussion of gonorrheal infection see Eye Infections, p. 223.

Tuberculosis As a Latent Disease

Injuries may so lower the resisting power and vitality of an individual as to "light up" a dormant tubercular condition and cause death therefrom. This was the finding of the New York Supreme Court[1] in affirming an award of the board. Here the employee, a brick mason, fell from a ladder and sixteen months later died of pulmonary tuberculosis. This claim was resisted on the ground that no causal relation had been established between the accident and death of employee. The employee was a strong man doing the work of a mason, never sick or ailing and the examinations at the time of accident failed to disclose any symptoms denoting active presence of tuberculosis. The court held, however,

> "It is not disputed, and is in this case conceded, that tubercular germs inhabit the human system generally. The suggestion in this evidence is that tuberculosis was present in the injured party's system at the time of the accident in the form known as incipient or latent, and the conclusion that the injury so lowered the man's vitality and lessened his resisting power, and that it was a contributing cause of death, finds some substantial basis in this evidence."

This doubtless is an extreme case. The courts generally require some specific evidence that disease existed at the time of accident.

That an injury exciting a pre-existing disease into virulent activity is a disability to be attributed to the accident and not to the pre-existing disease, is a ruling of the Indiana Supreme Court,[2] where an employee afflicted with Pott's disease, or tuberculosis of the spine, received a blow on the spine and as a result became totally and permanently disabled. The New York Supreme Court expressed a similar opinion[3] in a case in which the claim was made that the tuberculosis which culminated in the death of the employee did not result from the injury. In the words of the court,

> "The injury caused a hemorrhage which so far as the evidence discloses, the deceased never experienced before or after, and there is medical testimony to the effect that such

[1] *Van Gorden* v. *Hires Milk Co.* 184 N. Y. Supp. 402.
[2] *In re Colan.* 116 N. E. 842.
[3] *Van Keuren* v. *Dwight, Divine & Sons.* 179 App. Div. 509.

an injury would develop the disease (tuberculosis) then existing. If an employee has a disease, and having the same receives an injury arising out of and in the course of his employment which accelerates the disease and causes his death such disease results from such injury, and the right to compensation is secured even though the disease itself may not have resulted from the injury."

Traumatic injuries, especially in the region of the lung, have actuated dormant tuberculosis and caused death. Latent tuberculosis was lighted up by the fracture of two ribs and compensation granted by the New York board.[1] In Massachusetts, where an employee was previously affected by pulmonary tuberculosis, injuries to his back, chest and ribs materially hastened the fatal termination of the disease and an award was made to the dependents.[2] Likewise, a general "shake-up," causing serious injuries to face, arm, hip and thigh, developed traumatic pneumonia and accelerated a tubercular condition of employee, so that the New Jersey Compensation Bureau held[3] that accident was the proximate cause of death.

It has been held that, although tuberculosis be dormant at the time of an accident and the employee be not actively suffering from the disease, he is employed subject to his physical condition and the employer is, therefore, not exempt from paying compensation for disability caused by aggravation of the latent disease. Thus, where an employee was tightening a bolt, and his wrench slipped and struck his ankle, aggravating a pre-existing tubercular condition of the bone, so that it became necessary to amputate the leg, the Pennsylvania board[4] in affirming an award, said:

"It is immaterial whether or not the claimant suffered with tuberculosis of the bone previous to the accident, if the accident aggravated the condition and made amputation necessary."

Similar facts and rulings are found in a decision by the California commission,[5] which held that,

"Since the applicant's tuberculosis was quiescent and causing no active symptoms, it was not a disease but a condition subject to which the employer accepted the

[1] *Chappel* v. *United Cork Co. Weekly Underwriter.* Vol. 100, No. 10, March 8, 1919, p. 363.

[2] *In re Glennon.* 128 N. E. 942.

[3] *Phillips* v. *Baker Fleck Co. Weekly Underwriter.* Vol. 102, No. 20, May 15, 1920, p. 884.

[4] *Homan* v. *Eddystone Ammunition Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 232.

[5] *Nungesser* v. *American Express Co.* California. Industrial Accident Commission. Decisions. Vol. 8, p. 36.

employee and that therefore the entire disability was compensable."

An injury to the foot of a workman did not heal and amputation of the part was necessary. As a result of the drain on the employee's vitality an inactive state of tuberculosis was activated so that the employee died in two years. In this case the New York board[1] held that the injury was also the proximate cause of death.

Four years elapsed between injury and death of a workman who had bruised his knee, the injury requiring amputation. Dormant tuberculosis was lighted up, which prevented his return to work thereafter. In this case the New York courts[2] sustained an award to the widow.

In a Minnesota case it was claimed[3] that, as the disease had progressed to an advanced stage, with lungs badly affected, the injuries sustained were not sufficient to cause or hasten employee's death; but the fact that the employee had worked continuously at hard labor until the accident and had not been able to leave his bed thereafter was evidence that the injuries had some part in causing death and the award was sustained. A similar case is reported from California[4] in which the employee died from tuberculosis ten days after the accident. The injured worker was caught in machinery lacerating the skin on his arm with minor abrasions on the chest. A medical examination on the day of the accident revealed an advanced case of tuberculosis, tubercle bacilli in the sputum, elevated temperature, emaciation and no demonstrable areas of healthy lung tissue. In the opinion of medical experts the trauma would have produced but a slight hastening of death and compensation was accordingly denied because death was not proximately caused by the injury.

Compensation has been denied, however, in cases of tuberculosis antedating the time of accident, where it was considered that the injury did not accelerate the progress of the disease. A tubercular painter, working in an unoccupied and unheated house claimed that such exposure gave him a cold which aggra-

[1] *Young* v. *Adams Express Co.* New York. Department of Labor. Special Bulletin No. 97, p. 191.

[2] *Salerno* v. *Lane Construction Co.* New York. Department of Labor. Special Bulletin No. 97, p. 190.

[3] *State ex rel Jefferson* v. *District Court of Ramsey County.* 164 N. W. 1012.

[4] *Scott* v. *Birch Co.* California. Industrial Accident Commission. Decisions. Vol. 5, p. 197.

vated his condition. The Massachusetts board[1] found that the employee was not exposed to more than an ordinary risk of cold, to which any person working in the open was exposed on that day, and that the employment was not the cause of his disability.

In another case[2] it was concluded by the same commission that the claimant's disability due to the injury terminated, that the diseased condition which thereafter incapacitated the employee had no causal relation to the injury, and that death was due to the natural progress of tuberculosis pre-existing at the time of accident.

The Virginia commission[3] held the same opinion where an employee was suffering from pulmonary tuberculosis and sustained an injury to his knee. Compensation was denied because his present condition was held not due to the accident.

Compensation was paid during disability, but ceased at date of death in an Idaho case.[4] The employee received a fracture just above the ankle, but recovery was slow on account of his tubercular condition which was so far advanced that recovery therefrom was impossible.

Where an operation for hernia accentuated a tubercular condition and hastened death, compensation was awarded by the New York board.[5] The same facts and ruling are reported from California.[6] In Pennsylvania[7] compensation was awarded where a miner died from hemorrhage of the lungs after physical exertion in pushing coal down a chute, a pre-existing tubercular condition making the bursting of blood vessels more likely from such a strain. In the same state,[8] where an employee was injured by a cut and infection overwhelmed his vital resistance and aggravated a pre-existing tuberculosis of the lungs, it was held that the dependents were entitled to compensation. While attempting to prevent further leakage of gas an employee inhaled a quantity of the fumes, thus accelerating a dormant tuberculosis into an active condition; compensation was awarded

[1] *Fralin* v *Luxton Estate*. Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 2, p. 758.

[2] *McRae* v. *Boston Elevated Railway Co*. Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 3, p. 604.

[3] *Granger* v. *Pettijohn*. Virginia. Industrial Commission Opinions. Vol. 1, p. 66.

[4] *Ayotte* v. *Shoshone County and State Insurance Manager*. Idaho. Industrial Accident Board. 2nd Report, p. 73.

[5] *Deshon* v. *Federal Sugar Refining Co*. Affirmed, 190 App. Div. 890. New York. Department of Labor. Special Bulletin No. 106, p. 235.

[6] *Cox* v. *California Southern*. California. Industrial Accident Commission. Decisions. Vol. 5, p. 10.

[7] *Pedron* v. *Colonial Colliery*. 2 Mackey 177.

[8] *Ambrose* v. *Coxe Bros. & Co*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 176.

by the New Jersey Workmen's Compensation Bureau.[1] The New York Supreme Court[2] approved of the award where an employee succumbed to tuberculosis aggravated by being crushed between two automobiles, and death resulted eight months after the accident.

Compensation was denied in a Massachusetts[3] case where there was no proof that the accident or the employment itself accelerated the tubercular condition of employee. Where the accident complained of as the proximate cause of stimulating the disease was a slight blow on the head, the Pennsylvania board said:[4]

> "Had there not been this history of a slight injury to her head there would have been no thought that her unfortunate ending was brought about by any other than perfectly natural causes."

Tuberculosis as a Result of Accident

In the tuberculosis cases cited above, it has been held that the injury accelerated or aggravated a latent condition, which delayed the recovery or hastened death.

There is another group of cases in which there was no evidence of the existence of tuberculosis prior to the injury, and compensation was asked on the ground that the disease resulted from the accident, due to a lowering of resistance on the part of the injured party.

Thus where an employee died from tuberculosis, following a crushing injury to the chest, the Supreme Court of New Jersey[5] said:

> "We think, however, an inference may be properly drawn from evidence in the cause that the nature of the decedent's injuries was of such seriousness as to greatly impoverish his system and predispose it to an infection of tuberculosis of which there was not the slightest indication before injury."

The gradual development of tuberculosis with no attendant element of accident has been considered an occupational disease and compensation therefor denied by the New Jersey Workmen's Compensation Bureau.[6] Here the employee claimed that inhaling particles of iron and steel as a result of his employ-

[1] *Keller* v. *Celluloid Co. Weekly Underwriter.* Vol. 102, No. 22, May 19, 1920, p. 962.
[2] *McGoey* v. *Twin Garage & Supply Co.* 195 App. Div. 436.
[3] *Stam* v. *Thomas G. Plant Co.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 4, p. 595.
[4] *Howard* v. *Kresge.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 321.
[5] *Lundy* v. *George Brown & Co.* 106 Atlantic 362.
[6] *Guisi* v. *National Carbon Co. Weekly Underwriter.* Vol. 106, No. 18, May 6, 1922, p. 943.

ment affected his lungs and tuberculosis developed. No definite time or occasion being fixed upon as the date of the injury, it was held that the employee had not suffered an accident. Similarly, where an employee died from tuberculosis and the widow claimed that the disease was due to employment which exposed him to extreme cold and heat and currents and drafts of air, the Wisconsin commission held[1] it essential that some definite time be established when the injury arose and allowed no compensation for a disease which came on gradually.

Compensation was likewise denied in California[2] where tuberculosis was claimed to be caused by drafts encountered in the course of employment, which lowered the claimant's resistance to the disease.

In a case where there was a fall and the injuries brought on nephritis which lowered the employee's vitality and led to subsequent death from tuberculosis, the Indiana court held[3] that death was traceable to the fall and affirmed the award. Likewise, where an employee's hand was caught in a paper machine, requiring several operations which necessitated the administration of ether, during which time he gradually lost weight and died from pulmonary tuberculosis a year and a half later, the Supreme Court of New York[4] affirmed an award by the board on the ground that death was a result of accident. Where the same board made a death award on the presumption that the drain on the employee's vitality because of a fractured leg brought on tuberculosis and death, the court[5] reversed the award and held that the board had no right to rely on such presumption, and the claimant was not relieved from the necessity of establishing claim by legal evidence.

The courts and commissions hold, as a general rule, that pulmonary tuberculosis after an accident is the result of preexisting disease, but localized tubercular infection due to traumatism has been compensated as disease resulting from accident. Thus, where an employee stumbled over scrap iron and six months later tuberculosis manifested itself in the injured knee, making amputation of the leg necessary, the

[1] *Reitzner* v. *Wisconsin Grain & Malt Co.* Wisconsin. Industrial Commission. 6th Annual Report, p. 21.
[2] *Henton* v. *Hamberger.* California. Industrial Accident Commission. Decisions. Vol. 9, p. 92.
[3] *Retmier* v. *Cruse.* 119 N. E. 32.
[4] *Champine* v. *De Grasse Paper Co.* Affirmed, 181 App. Div. 909. New York. Department of Labor. Special Bulletin No. 87, p. 230.
[5] *Bowman* v. *Gibson.* 194 App. Div. 855.

Illinois commission[1] awarded compensation for permanent total disability, as the workman had previously lost an arm. A Pennsylvania workman was struck in the abdomen and tubercular peritonitis set in. Here death was held[2] to be due to a disease resulting from the accident. Tuberculosis of the hip, resulting from a blow in that region by a falling box striking the employee, was held to be compensable in Illinois.[3]

The question of voluntary act versus accident arose in a New York case[4] in which a workman, to save himself from injury when a timber of a crane broke, jumped into a river. The water was cold and he contracted pleurisy, and later developed tuberculosis. In affirming the award of the board, the court said:

> "We consider claimant in the same position as if the accident had thrown him into the river and clearly his being thrown ten feet into the water was an injury within the meaning of the act, and the disease following has been found to naturally and unavoidably result from that injury."

Miscellaneous Latent Diseases

The general rule among industrial commissions is to award compensation for aggravation of a pre-existing disease when complicated by an injury, provided such causal relation can be established. Kentucky furnishes an exception to this rule, as the law in that state says that a personal injury by accident shall not include the results of a pre-existing disease.

Delirium Tremens

Delirium tremens, developing as a secondary shock to an employee, who had fractured his leg, resulted in death. The Michigan Supreme Court,[5] in affirming the award in this case, said:

> "The fact that his system had been so weakened by his intemperate habit that it was unable to withstand the effects of the injury does not thereby shift the proximate cause of death from his injury to his intemperate habit."

In a similar Massachusetts case,[6] in which the employee was addicted to the use of alcohol but not intoxicated at the time of the accidental fracture of his ankle, it was held that death from delirium tremens was a result of the accident.

[1] *Wabash Railway Co.* v. *Industrial Commission of Illinois.* 121 N. E. 569.
[2] *Kelly* v. *Watson Coal Co.* 115 Atlantic 885.
[3] *Swift* v. *Industrial Commission.* 123 N. E. 267.
[4] *Rist* v. *Larkin & Sangster.* 156 N. Y. Supp. 875.
[5] *Ramlow* v. *Moon Lake Ice Co.* 158 N. W. 1027.
[6] *In re Donovan.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 3, p. 733.

Dementia Praecox

Dementia praecox existing as a dormant hereditary condition became activated as a result of blows on the arm and head and the resulting insanity was compensated by the New York board,[1] as a result of the injury.

Diabetes

Where diabetes was set in motion by an accident and the employee died from that disease, the New Jersey Supreme Court[2] held that death was caused by the accident. A Pennsylvania case[3] holds that the injury was the direct and exciting cause of diabetes mellitus, which was the immediate cause of employee's death. A heavy box fell on the employee's foot and gangerene followed. Existing diabetes accelerated the gangrene so that it became necessary to amputate the leg and the New York Supreme Court[4] sustained an award for compensation.

In a California case[5] where a workman sprained his ankle, lacerating ligaments between the bones and joints of the foot, and almost four months later gangrene developed in two of the toes, it was discovered that he had diabetes, apparently in an early stage. No compensation was allowed for aggravation of the injury but for disability traceable to the injury alone. The medical evidence showed that gangrene was not an unusual complication of diabetes and at times occurred without injury; also that it can occur as a result of injury by reason of infection or because of the obliteration or narrowing of blood vessels to a degree incompatible with such nourishment of the tissues as is necessary to prevent the development of gangrene. In this case it was held to be improbable that the gangrene from which the claimant was suffering could be due to the accident because of the lapse of time and also because the injury was not such as to cause infection or interference with circulation.

The New York board[6] allowed death benefits in a case where infection aggravated by pre-existing diabetes resulted in death. Where diabetic gangrene developed after stepping on a nail,

[1] *Fisher* v. *Lanreine Costume Co. Weekly Underwriter.* Vol. 105, No. 5, July 30, 1921, p. 203.

[2] *Geizel* v. *Regina Co.* 114 Atlantic 328.

[3] *Smithgall* v *State Workmen's Insurance Fund.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 125.

[4] *Cain* v. *Technola Piano Co.* New York. Department of Labor. Special Bulletin No. 106, p. 204.

[5] *Slayton* v. *City of Los Angeles.* California. Industrial Accident Commission. Decisions. Vol. 8, p. 10.

[6] *Locco* v. *Graves Co.* Affirmed, 193 App. Div. 928. New York. Department of Labor. Special Bulletin No. 106, p. 181.

however, loss of the foot was not compensated by a Connecticut commissioner because it was held that the gangrene developed from diabetes and not from the injury.[1]

Goiter

Hyper-thyroidism or goiter, from which an employee was suffering, caused the prolongation of the period of disability incident to a cut and infection of his finger. The condition of the thyroid gland was considered by the California commission[2] as a potential disease and of itself was not reponsible for the period of disability, all of which was compensated as a result of the accident. The shock of an accident so frightened a woman employee that a pre-existing goiter was aggravated and the New York board[3] made an award for the resulting disability.

Nephritis

In Pennsylvania[4] an injury to a leg aggravated a pre-existing chronic nephritis so that death occurred sooner than it otherwise might and compensation was awarded. A Connecticut commissioner[5] denied compensation to an employee 66 years of age, suffering from nephritis, hardening of the arteries and tumors, who was seized with a weakness growing out of his physical troubles and toppled over. His injury was held not due to his employment.

When a period of time intervenes between the accident and death from nephritis the causal connection is removed and no death benefits have been allowed. This was the case in Illinois[6] where the period which intervened was one month, and in New York[7] where the period was five months. Where the employee died from acute nephritis sixteen months after an accident, having appeared in good health in the meantime, there was no proof that the disease was aggravated by the injury and the Iowa commissioner[8] refused compensation.

[1] *Huetschler* v. *Winchester Repeating Arms Co. Weekly Underwriter.* Vol. 100, No. 26, June 28, 1919, p. 990.

[2] *Stranahan* v. *Homestead Development Co. Weekly Underwriter.* Vol. 106, No. 2, January 14, 1922, p. 99.

[3] *Armstrong* v. *American Red Cross.* New York. Department of Labor. Special Bulletin No. 106 p. 220.

[4] *Dettmar* v. *Manhattan Life Insurance Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 2, p. 208.
Cromly v. *Everhart.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 219.

[5] *O'Donnell* v. *Winchester Repeating Arms Co. Weekly Underwriter.* Vol. 100, No. 14, April 12, 1919, p. 558.

[6] *Lawrence Ice Cream Co.* v. *Industrial Commission.* 131 N. E. 369.

[7] *Eitel* v. *Feist Sons Co. Weekly Underwriter.* Vol. 102, No 11, March 13, 1920, p. 491.

[8] *Lindsey* v. *Strombom.* Iowa. Workmen's Compensation Service. 4th Biennial Report, p. 70.

Osteomyelitis

In New York[1] an employee suffering from an inactive bone infection following typhoid fever contracted nine years before, was struck on the leg, causing an abscess and osteomyelitis. Although the accident was slight, the injuries resulting from the dormant infection becoming active were attributed to the accident, thereby compelling an award for compensation for the entire disability.

Phlebitis

When the left leg was weakened (broken) by prior injury and the workman lost his right leg in an accident, the loss of the right leg threw a strain and weight on the left, causing phlebitis and rendering it useless. According to a decision of a Connecticut commissioner,[2] the phlebitis was not attributed to the prior injury but to the last injury, which was the predisposing cause.

Endocarditis, with nephritis, hastened to a fatal result by a blow in the abdomen was compensated by the New York board.[3] Rheumatism alleged to be caused by back strain was compensated in Connecticut,[4] although the employee was suffering from rheumatism before the injury, which caused manifestation of the disease in another part of the body. A pre-existing hydrocele which had caused no trouble was made into a disability by injury and was awarded treatment and half the usual compensation in California.[5]

[1] *Lawson* v. *Wallace & Kenney*. 202 App. Div. 435.
[2] *Saddlemire* v. *American Bridge Co*. 110 Atlantic 63.
[3] *Cook* v. *N. Y. Central Railroad*. New York. Department of Labor. Special Bulletin No. 81, p. 255.
[4] *Auguzzi* v. *Blakeslee & Son*. *Weekly Underwriter*. Vol. 95, No. 4, July 15, 1916, p. 67.
[5] *Gove* v. *Hanlon Dry Dock & Shipbuilding Co*. California. Industrial Accident Commission. Decisions. Vol. 7, p 106.

XXV

INFECTIONS RESULTING FROM ACCIDENT

Infection and disability following vaccination have been compensated as an accidental injury in Massachusetts.[1] In this case all employees in a shoe factory, over the protest of the owners, were ordered vaccinated by the local board of health. The claimant's vaccination became infected and the board awarded compensation on the ground that the injury arose out of and in the course of employment.

The Michigan courts[2] have held an opinion opposite to that of Massachusetts just quoted and have denied compensation accordingly. In this case it was held that the vaccination was not done at the instance of the employer, but by direction of the board of health and was for the benefit of the general public as well as of the employee. Disability, therefore, did not arise out of employment. Similarly, an award was denied in Pennsylvania[3] for infection following vaccination, since the commission held that the vaccination and resulting disability did not meet the requirements of an accident under the Pennsylvania law.

The contention that an infection was not the result of an accident which bruised the skin on the back of an employee's hand, and that the employer was not liable for the prolonged disability, was denied by the California Supreme Court[4] which said:

> "We perceive no merit in the claim that this disability was not proximately caused by the injury and abrasion of the skin. Such results do ensue from such abrasion, and they are brought about by the operation of what are ordinarily considered natural forces; that is by the intervention of infectious germs usually, or at least frequently, present in the air or on the surface of substances with which any person may come in contact, and which are invisible to the eye and imperceptible to the senses. The accident was the proximate cause of the injury."

Similar to the California decision, *supra*, is a case in New

[1] *In re Fewore*. Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 2, p. 332.
[2] *Krout* v. *Hudson Co*. 166 N. W. 848.
[3] *McCreary* v. *Pennsylvania Railroad*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 302.
[4] *Great Western Power Co*. v. *Pillsbury*. 151 Pacific 1136.

York[1] where an award was granted a model for loss of use of a finger caused by infection due to pricking her finger with a pin while trying on an unfinished garment. In a Wisconsin case[2] streptococcus infection gaining entrance through two small cuts in the skin caused the death of a worker and compensation was awarded therefor. In Massachusetts,[3] infection developing through a small scratch caused death; the board held that it was not necessary to prove what caused the scratch, its occurrence in the course of employment being sufficient to sustain an award. Actual proof that infection was contracted in the employment and not from other sources was not held necessary in a Michigan case[4] where the presumption was very strong that it occurred in the employment. Here an undertaker's assistant died from a virulent infection after cleaning embalming instruments used in caring for the body of a person who had succumbed to the same type of infection.

An award was affirmed by the New York Supreme Court,[5] even though the port of entry for the germs of infection was a wound incurred outside of the premises and the employment. Here the decedent cut his finger at home and while engaged at his employment in cleaning a urinal his hand became infected. Death from blood poisoning was held to be due to an accident. A contrary view was held by the Wisconsin commission[6] in a case where the facts were somewhat similar. The claimant cut his finger on Sunday while visiting friends, and in the course of his work during the following week the cut became infected, with serious results. The opinion reads in part:

> "In cases where a person sustains a cut or abrasion while at work and the wound subsequently becomes infected compensation is awarded for disability resulting from the accidental injury and subsequent infection. The original injury is always regarded as the proximate cause of the disability. The proximate cause of applicant's disability was the cut, and as this was not sustained in the course of his employment, the application must be dismissed."

Compensation has been awarded in a Pennsylvania case[7] where an accidental injury became infected and death resulted. In

[1] *Bloomfield* v. *November*. 172 App. Div. 917. Reversed, 219 N. Y. 374, for lack of proper notice to employer.
[2] *Rahr Sons Co.* v. *Industrial Commission*. 163 N. W. 169.
[3] *In re Bean*. 116 N. E. 826.
[4] *Blaess* v. *Dolph*. 161 N. W. 885.
[5] *Horrigan* v. *Post Standard Co*. 224 N. Y. 620.
[6] *Schwedland* v. *Manitowoc Shipbuilding Co*. Wisconsin. Industrial Commission. 8th Annual Report, p. 43.
[7] *Hennessey* v. *United Stove Repair Co*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 2, p. 169.

this case an employee's toe was punctured by a nail and he died from an infection on his neck, which was secondary to the original infection in the toe. An award was also affirmed by the Supreme Court of Michigan[1] in a case in which the employee received a slight injury of his thumb, which became infected. He developed acute inflammatory rheumatism four days after being dismissed by the physician as cured, and died ten days later. Medical testimony supported the court's opinion that rheumatism was caused from secondary infection as a result of the local one and that the accident was the proximate cause of death.

Dermatitis, an infection of the skin caused by handling hides in which chromic acid was present, although the employee had not received a cut or bruise nor was the skin broken, was considered an accidental injury in a Pennsylvania court[2] and an award by the board was sustained. The court said:

> "Mere contact with an extraneous substance, if it results in a disturbance of any kind in the structure of the human body involved is 'violence' within the legislative meaning."

Somewhat similar is a California award[3] because of irritation or infection of the skin of the lower limbs which was later communicated to the hands and arms. Other employees had also suffered similar skin affections. The cause was laid to dust, through which the employee was obliged to walk in performing his work. The commission held that it was not necessary for the employee to account scientifically for the source of the contagion or the cause of the disease, but only that he establish by preponderance of likelihood the fact that his disability happened in and arose out of the employment. In Kansas[4] an employee, in order to check out, was obliged to wade through flood water to reach the timekeeper's office. At the time an old infection in the foot had not healed and was activated thereby, later necessitating amputation. It was held that the infection came through the agency of the flood water which was a special risk not common to usual work done; therefore, the injury arose out of the employment.

That infection may result from a blow or body pressure without a visible external wound was decided by the Massachu-

[1] *Perdew* v. *Nufer Cedar Co.* 167 N. W. 868.
[2] *Roller* v. *Drueding Bros.* 1 Mackey 69.
[3] *Reeves* v. *Diamond Match Co.* California. Industrial Accident Commission. Decisions. Vol. 5, p. 236.
[4] *Monson* v. *Batelle.* 170 Pacific 801.

setts board.[1] An employee claimed that the pressure of the shears in cutting wire caused a palmar abscess, and the commission held this to be a personal injury. Also a carpenter handling doors bruised the palm of his hand in using a screwdriver, the bruise resulting in a "frog felon." The injury was held[2] an accident under the New York workman's compensation act, but the Court of Appeals reversed the award. In a Pennsylvania case[3] the employee was required to hold a casting by one end while he struck the other with a heavy hammer. With each blow he sustained a jar to the hand holding the casting. The abscess which developed in the palm of his hand was held a personal injury by accident under the Pennsylvania compensation law. Where an abscess formed on the thumb due to rubbing or pressure from an unguarded or unpadded splint worn because of fractured arm, the New Jersey Courts[4] held that the injury was the result of accident and the employer was liable for compensation. Contrary rulings as to similar injuries are found in Oklahoma and Michigan. The palmar abscess in the Oklahoma case[5] resulted from the rubbing of a pick handle against the palm. Claim was dismissed because the injury was held not an accident. For the same reason in Michigan, compensation was refused an employee who developed a bone felon while putting strips into metal frames by use of pliers. The infection developed between the bone and periosteum and could have developed from continued pressure. The Michigan Supreme Court[6] held that this was not an accidental injury, although at the time the felon developed the strips were shorter than usual and required the exertion of more strength to put them in place. The injury was considered rather in the nature of an occupational disease.

Miscellaneous Infections

The following miscellaneous list of infections for which compensation has been granted is of interest. In New Jersey a cook was disabled with blood poisoning for five weeks as the result of a pinch on the finger by a lobster.[7] An employee,

[1] *In re John Erickson.* Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 2, p. 149.
[2] *Woodruff* v. *Howes Construction Co.* 228 N. Y. 276.
[3] *Brenner* v. *National Safety Fifth Wheel Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 76.
[4] *Newcomb* v. *Albertson.* 89 Atlantic 928.
[5] *Beckam* v. *Coal & Coke Co. Weekly Underwritter.* Vol. 96, No. 24, June 16, 1917, p. 810.
[6] *Perkins* v. *Jackson Cushion Spring Co.* 172 N. W. 374.
[7] *Masso* v. *Klein Hotel. Weekly Underwriter.* Vol. 91, No. 22, Nov. 28, 1914, p. 618.

who, while irrigating an orange grove in California was bitten on the leg by a spider, was denied compensation[1] because the hazard was a risk common to the community at large; while the same commission awarded compensation[2] to a seaman whose arm became infected from an insect bite because he was on a vessel and under an extra risk at the time from spiders and poisonous insects.

In New York,[3] an employee opened a keg of methylene blue in powder form and some of the powder blew onto his face and hands. The dye entered cracks in the employee's hands and dermatitis resulted. The impairment of the functions of the skin caused the employee's heart and kidneys to become overtaxed and death resulted almost a year after the accident. Death was held as due to a compensable accident and his widow received an award.

Contracting poison ivy was held an accidental injury by the New York courts[4] and compensation was awarded the widow of a section hand who came in contact with poison ivy while engaged in cutting weeds along the railroad right of way. While being treated, infection developed and as his power of resistance was reduced, he developed bronchitis and later edema of the lungs from which he died. The award in this case was reversed[5] later because it was held that the employee was engaged in interstate commerce at the time of his contact with the poison ivy.

Ivy poisoning was also compensated in Massachusetts[6] where the employee became infected while burning brush. A federal case[7] holds that ivy poisoning is an accidental injury and

> "although accident must show physical marks of injury, there is no doubt that the eruption was caused by direct contact with ivy although it did not appear until two or three days after the contact."

Oak poisoning contracted by a laborer in California[8] while working in the foliage caused disability for which compensation was granted.

[1] *Eckert* v. *Regents*. California. Industrial Accident Commission. Decisions. Vol. 7, p. 62.
[2] *Gresswell* v. *Matson Navigation Co*. California. Industrial Accident Commission. Decisions. Vol. 6, p. 49.
[3] *Sabo* v. *Barnet Leather Co*. *Weekly Underwriter*. Vol. 106, No. 12, March 25, 1922, p. 650.
[4] *Plass* v. *Central New England Railway Co*. 169 App. Div. 826.
[5] *Plass* v. *Central New England Railway Co*. 221 N. Y. 472.
[6] *In re O'Shaughnessy*. Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 3, p. 537.
[7] *Railway Mail Association* v. *Dent*. 213 Federal 961.
[8] *Mandelbaum* v. *City and County of San Francisco*. California. Industrial Accident Commission. Decisions. Vol. 9, p. 110.

XXVI

EYE INJURIES

Statutory Provisions

One of the most controversial subjects coming before compensation boards and commissions for settlement is that of injuries to the eye. While the states are pretty well in accord as

TABLE 12: STATUTORY PROVISIONS FOR EYE INJURIES UNDER WORKMEN'S COMPENSATION LAWS

(National Industrial Conference Board)

State	Compensation for*	
	Blindness	Enucleation
Alabama	100	...
Alaska	$1440	...
Colorado	104	139
Connecticut	104	...
Delaware	113	...
Georgia	100	...
Idaho	100	120
Illinois	100	...
Indiana	150	...
Iowa	100	...
Kansas	110	...
Kentucky	100	...
Louisiana	100	...
Maine	100	...
Maryland	100	...
Michigan	100	...
Minnesota	100	...
Montana	100	120
Nebraska	125	...
Nevada	25 mo.	30 mo.
New Jersey	100	...
New Mexico	100	110
New York	128	...
North Dakota	130	...
Ohio	100	...
Oklahoma	100	...
Oregon	40 mo.	...
Pennsylvania	125	...
Rhode Island	50	...
South Dakota	100	...
Tennessee	100	...
Texas	100	...
Utah	100	120
Vermont	100	...
Virginia	100	...
Washington	$900	$1200
West Virginia	132	...
Wisconsin	140	160
Wyoming	$1500	...

*Figures shown are in weeks unless otherwise indicated.

to the amount of compensation due for the loss of sight or the physical loss of an eye by enucleation, when the injury results in a partial loss of vision important differences are seen. Table 12 gives the statutory provisions as to compensation for loss of vision or loss of the eye.

In addition to the awards for loss of sight or enucleation, the loss of both eyes constitutes permanent total disability in all but four[1] of the states having compensation laws.

Methods of Measurement of Defect

When estimating partial loss of vision attempts have been made to assign percentage values to varying degrees of defective vision as determined by the Snellen test chart. These tables

TABLE 13: DR. V. A. CHAPMAN'S TABLE OF PERCENTAGE OF VISION LOSS*

Vision of	Per cent loss of vision
20/ 20	0
20/ 30	5
20/ 40	10
20/ 50	15
20/ 60	20
20/ 70	25
20/ 80	30
20/ 90	35
20/100	40
20/110	45
20/120	50
20/130	55
20/140	60
20/150	65
20/160	70
20/170	75
20/180	80
20/190	85
20/200	90
20/210	95
20/220	100

This table has been pronounced mathematically correct by expert mathematicians. The principle of this table is to allow ½% loss of vision for each loss of 1 foot distance, which equals 5% for each loss of 10 feet distance.

**Medical Record*, New York, Vol. 101, No. 11, March 18, 1922, p. 450.

have been developed either by ophthalmologists of recognized standing or by ophthalmological societies and are designed to give accurate estimates of the amount of visual acuity or central vision lost when tested by the Snellen chart.

In comparing these tables they are found to be in agreement on one item only: 20/20 equals normal vision. Higher readings

[1]Arizona, Massachusetts, New Hampshire, North Dakota.

TABLE 14: CHICAGO OPHTHALMOLOGICAL SOCIETY'S COMPENSATION TABLE FOR VISUAL LOSSES OF ONE EYE*

Visual capacity	Per cent of visual efficiency	Per cent of loss of vision
20/ 20	100.0	0.0
20/ 30	94.5	5.5
20/ 40	89.0	11.0
20/ 50	83.5	16.5
20/ 60	78.0	22.0
20/ 70	72.5	27.5
20/ 80	67.0	33.0
20/ 90	61.5	38.5
20/100	56.0	44.0
20/110	50.0	50.0
20/120	41.0	59.0
20/130	36.5	63.5
20/140	32.0	68.0
20/150	28.5	71.5
20/160	23.0	77.0
20/170	18.5	81.5
20/180	14.0	86.0
20/190	12.0	88.0
20/200	10.0	90.0

**Medical Record*, New York, Vol. 101, No. 11, March 18, 1922, p. 450.

are given different estimates, and readings giving total loss of vision from the industrial standpoint are widely apart. These tables, together with a composite table showing their variations are given below. The function of central vision or visual acuity is the only one that has been considered by the authors of these tables. The tables of the American Medical Association are an exception to this general rule, and will be discussed more in detail later.

TABLE 15: TABLE OF MINNESOTA ACADEMY OF OPTHALMOLOGY

(Supplied by the Industrial Commission of Minnesota)

Snellen chart readings	Percentage loss of vision
20/ 20	0
20/ 25	5
20/ 30	10
20/ 40	20
20/ 50	25
20/ 60	33⅓
20/ 70	40
20/ 80	50
20/100	75
20/120	85
20/200	100

TABLE 16: COMPARISON OF SNELLEN CHART READINGS IN DIFFERENT TABLES

(National Industrial Conference Board)
(These readings are for visual acuity only)

Snellen Chart Readings	Table Proposed By			
	American Medical Assn.	Dr. Chapman	Chicago Ophthal. Society	Minnesota Academy Ophthal.
20/ 20	0	0	0	0
20/ 30	2.5	5	5.5	10
20/ 40	5.	10	11.	20
20/ 50	7.5	15	16.5	25
20/ 60	10.	20	22.	33⅓
20/ 70	12.5	25	27.5	40
20/ 80	15.	30	33.	50
20/ 90	17.5	35	38.5	..
20/100	20.	40	44.	75
20/110	22.5	45	50.	..
20/120	25.	50	59.	85
20/130	27.5	55	63.5	..
20/140	30.	60	68.	..
20/150	32.5	65	71.5	..
20/160	35.	70	77.	..
20/170	37.5	75	81.5	..
20/180	40.	80	86.	..
20/190	42.5	85	88.	..
20/200	45.	90	90.	100
20/210	47.5	95	..	..
20/220	50.	100	..	..

The West Virginia state compensation commissioner has adopted a table different from any of the other tables used in compensation work. This table is based upon tables used in certain European countries, notably Germany, for the estimation of defective vision.

California has developed a method of computing compensation for eye and other injuries in which the age and occupation of the injured worker are given consideration. An ingenious and intricate schedule has been worked out for this purpose, which, as far as known, is the only one in use.

Table 18 shows the official use of ophthalmological tables by different states having compensation.

In those states that have not adopted official tables the percentage of loss of vision is determined from the report of the physicians who treat the case.

When awarding compensation, few commissions consider other functions than visual acuity, the field of vision and binocular single vision being ignored, although at times both

TABLE 17: PERMANENT DISABILITIES OF EYE EXPRESSED IN PERCENTAGE OF TOTAL DISABILITY

(As used by West Virginia Compensation Commissioner.)

Visual Capacity	20/20	19/20	18/20	17/20	16/20	15/20	14/20	13/20	12/20	11/20	10/20	9/20	8/20	7/20	6/20	5/20	4/20	3/20	2/20	1/20	0/0
20/20	0	1	3	5	6	8	10	11	13	15	16	18	20	21	23	25	26	28	30	31	33
19/20	1	3	5	7	9	10	12	13	15	17	19	21	23	24	26	27	29	31	33	35	37
18/20	3	5	7	9	11	12	14	15	17	19	21	23	25	26	28	30	32	33	35	37	40
17/20	5	7	9	11	13	15	16	18	20	21	23	25	27	28	30	32	35	36	38	40	43
16/20	6	9	11	13	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
15/20	8	10	12	15	16	18	20	22	24	26	28	30	32	34	36	38	41	43	45	47	49
14/20	10	12	14	16	18	20	22	24	26	28	30	32	35	37	39	41	44	46	48	50	54
13/20	11	13	15	18	20	22	24	27	29	31	33	35	38	40	42	44	47	49	51	53	57
12/20	13	15	17	20	22	24	26	29	31	34	36	38	41	43	46	48	50	53	55	57	60
11/20	15	17	19	21	24	26	28	31	34	36	38	40	43	46	48	50	53	56	57	60	63
10/20	16	19	21	23	26	28	30	33	36	38	41	43	46	48	50	53	56	58	60	63	66
9/20	18	21	23	25	28	30	32	35	38	40	43	46	49	52	54	56	59	61	64	67	70
8/20	20	23	25	27	30	32	35	38	41	43	46	49	52	55	57	60	62	65	68	71	73
7/20	21	24	26	28	32	34	37	40	43	46	48	52	55	57	59	62	65	67	70	73	77
6/20	23	26	28	30	34	36	39	42	46	48	50	54	57	59	62	66	68	71	74	77	80
5/20	25	27	30	32	36	38	41	44	48	50	53	56	60	62	65	68	71	74	77	80	83
4/20	26	29	32	35	38	41	44	47	50	53	56	59	62	65	66	71	75	78	81	84	87
3/20	28	31	33	36	40	43	46	49	53	55	58	61	65	67	71	74	78	81	84	87	90
2/20	30	33	35	38	42	45	48	51	55	57	60	64	68	70	74	77	81	84	87	90	94
1/20	31	35	37	40	44	47	50	53	57	60	63	67	71	73	77	80	84	87	90	94	97
0/0	33	37	40	43	46	49	54	57	60	63	66	70	73	77	80	83	87	90	94	97	100

TABLE 18: TABLES OF VISUAL DEFECTS IN USE IN VARIOUS STATES*

(National Industrial Conference Board)

American Medical Association table	Chapman table	Chicago Ophthalmological Society table	Minnesota Ophthalmological Society table	No table adopted
Maine	Montana	Idaho	Iowa	Alabama
Nebraska	Oklahoma	Nevada	Wisconsin	Indiana
	Utah		Minnesota	Louisiana
				Massachusetts
				Michigan
				New Hampshire
				New Jersey
				New York
				North Dakota
				Ohio
				Oregon
				Pennsylvania
				Rhode Island
				South Dakota
				Virginia
				Vermont
				Washington

*The states enumerated are those replying to the Board's inquiry. West Virginia has adopted a special table of its own. See p. 208.

of these functions are of importance. New York is the only state taking notice in the law of either of these functions. The law[1] in this state specifies that the loss of binocular single vision or 80% of vision of one eye is equivalent to the loss of an eye and subject to the same compensation benefits.

The American Medical Association table is the only one that attempts to evaluate for compensation purposes the three components of vision. The report[2] of the Committee on Estimating Compensation for Eye Injuries of the Section of Ophthalmology of that organization assigns the value of these three functions as follows:

> "Factor A: Industrial loss of central visual acuity for distance or for near, 50 per cent compensation.
>
> "Factor B: Industrial loss of field of vision, 25 per cent compensation.
>
> "Factor C: Industrial loss of binocular single vision, 25 per cent compensation."

The tables proposed by this committee for estimating percentage loss of vision for distance and for near are as follows:

[1]Workmen's Compensation Law, 1922, Sec. 15-p.

[2]*Journal American Medical Association*, Vol. 79, No. 22, p. 1843. November 25, 1922.

Factor A.—Visual Acuity for Distance			Factor A.—Visual Acuity for Near		
Visual acuity at 20 feet	Visual acuity in percentage	Compensation in per cent for loss of visual acuity	Visual acuity at 14 inches	Visual acuity in percentage	Compensation in per cent for loss of visual acuity
20/ 20	100	0	14/ 14	100	0
20/ 30	95	2.5	14/ 21	95	2.5
20/ 40	90	5.	14/ 28	90	5.
20/ 50	85	7.5	14/ 35	85	7.5
20/ 60	80	10.	14/ 42	80	10.
20/ 70	75	12.5	14/ 49	75	12.5
20/ 80	70	15.	14/ 56	70	15.
20/ 90	65	17.5	14/ 63	65	17.5
20/100	60	20.	14/ 70	60	20.
20/110	55	22.5	14/ 77	55	22.5
20/120	50	25.	14/ 84	50	25.
20/130	45	27.5	14/ 91	45	27.5
20/140	40	30.	14/ 98	40	30.
20/150	35	32.5	14/105	35	32.5
20/160	30	35.	14/112	30	35.
20/170	25	37.5	14/119	25	37.5
20/180	20	40.	14/126	20	40.
20/190	15	42.5	14/133	15	42.5
20/200	10	45.	14/140	10	45.
20/210	5	47.5	14/147	5	47.5
20/220	0	50.	14/154	0	50.

The Estimation of Factor B, the Field of Vision, is Suggested by the Following Table:

Contraction to 65 degrees = 0% compensation
Contraction to 60 degrees = 2.08% compensation
Contraction to 55 degrees = 4.16% compensation
Contraction to 50 degrees = 6.25% compensation
Contraction to 45 degrees = 8.33% compensation
Contraction to 40 degrees = 10.40% compensation
Contraction to 35 degrees = 12.50% compensation
Contraction to 30 degrees = 14.58% compensation
Contraction to 25 degrees = 16.66% compensation
Contraction to 20 degrees = 18.75% compensation
Contraction to 15 degrees = 20.83% compensation
Contraction to 10 degrees = 22.91% compensation
Contraction to 5 degrees = 25.00% compensation

Tests

Eleven of the compensation boards and commissions have adopted a table for determining the amount of vision remaining in an injured eye. (See table, page 210.) In those states which have no official table but which rely on the testimony of local specialists for an estimation of visual loss, contested cases are few. In New York the provisions for estimation of eye injuries have been very carefully defined. The loss of 80% of vision or the loss of binocular single vision is considered equal to the loss of an eye.

The Snellen test is the one used by all commissions for the estimation of eye injuries. This test is not adapted to the estimation of the field of vision or binocular single vision, both of which functions are of importance in the consideration of vision as a whole. For this reason the findings of commissions using the Snellen test of central vision alone have been contested in the courts. The leading decision on this question was rendered in New York.[1] As many points of interest are raised in this decision it is quoted in full.

> "The claimant was given an award for sixteen per cent loss of vision, twenty and forty-eight one-hundredths weeks at twenty dollars, plus two weeks at ten dollars. The award is questioned upon one ground only, namely, that the evidence did not show a loss of sixteen per cent of vision.
>
> "This presents a plain question of fact for the Board. A similar question arose in Johnson v. United States Railroad Administration (193 App. Div., 580), where the question was, what loss of use of an arm had been suffered. The Court said: 'There is of course no method by which the percentage loss of the use of an arm can accurately be determined. It is at best a matter of rough estimate and approximation. . . . The question is one of fact for the Industrial Commission, to be determined by it upon such proof as physicians may give, in accordance, however, with its own experience, good sense and judgment.' We think this is the correct rule to be applied here.
>
> "In this record is introduced an unusual condition. The case was tried before Deputy Commissioner Richardson. He stated in open hearing that the Snellen test had always been used by the Commission. 'We do not accept any system but the Snellen.' Later, during the examination of Dr. McCaw, he said: 'The idea that we have to follow in our cases here is that the Commission desires to follow only the Snellen test table, until such time as some table is adopted.' And again: 'In order to get this case right, and in order to bring the eye question before the proper people, including the Commission and the courts, it seems to me advisable for us to follow instructions of the Commission and award on the acuity of vision as set forth here, which would give this man 16% loss of vision.' One gets the impression that, disregarding all other evidence in the case, he had simply decided that the Snellen test was the proper test to determine the percentage loss of vision, without any finding that he considered sixteen per cent the loss given by the Snellen test, to be the actual loss sustained by this claimant. If this were the actual result in the case it would have to go back to the Industrial Board to make a finding of the percentage loss of vision suffered by the claimant. But the findings were made, not by the deputy commissioner, but by the State Industrial Board, John D. Higgins, chairman; and, at the time of making the finding, they had the entire record before them.

[1] *Turpin* v. *St. Regis Paper Co.* 192 N. Y. Supp. 85.

"It appears in the testimony of Dr. McCaw that a test or formula, adopted about a year before the hearing by the New York State Medical Society, is a more accurate test than the Snellen test; and, if we were called upon to decide the question upon the evidence in this case, we should have to hold that a wrong test had been used and send the case back to the Board, but we do not think that the court should determine whether the Snellen test or some other test furnishes a proper rule for guidance of the Board in determining percentage of loss of vision. Necessarily some test must be used, but this is only an element of the evidence and the Board must pass upon the evidence and determine what evidence it shall accept and what weight shall be given to its various parts. The Industrial Board had the entire record before it and we think there was sufficient evidence to uphold its findings. It appears that, in the Snellen test, a chart having on it characters of different sizes is used. If a man standing twenty feet from the chart can see those details on the chart which a man of normal vision can see at forty feet, his vision is characterized as 20-40. The claimant's eyes showed this condition of vision; but with the aid of glasses a correction is enjoyed, so that his vision is represented by the figures 20-30, and it is agreed by all parties that this indicates, or is equivalent to, eighty-four per cent of normal vision, showing a loss of sixteen per cent. Evidence is also presented by the appellants tending to show that this is the measure of the 'direct or central vision' only. The direct or central vision is that used directly upon objects in seeing distinctly and clearly size, form, color, etc.; but that there are other elements of vision that must be taken into account to determine the 'useful vision,' namely, 'field vision' and the 'binocular vision.' The field vision means the wide, general vision used in catching in sight, following and locating objects. The binocular vision is the vision of the two eyes acting together, used in determining depth, width, distance and comparative placing of different objects. In determining useful vision, as the term is used by the appellant's witnesses, an arbitrary formula has been accepted by the oculists. An arbitrary value is given to each of the elements of vision. For normal sight, direct vision, 100; field vision, 100; binocular vision, 50; the total of 250 is used as the denominator. Then the sum of the percentages of each element of normal useful vision, found by an examination of the patient, is used as the numerator. In this case direct vision is found to be 84 per cent; field vision, 100; binocular vision, 50, making a total of 234; and the fraction is 234/250, showing a per cent of useful vision, under this standard of measurement, of ninety-three and one-half per cent, showing a loss of six and one-half per cent, which we are asked to hold is the loss suffered by claimant.

"While Dr. McCaw testified that the formula used by the New York Medical Society is the more accurate, still the Board was not bound by the evidence of the expert and it was for them to determine, the nature of the test having been fully explained, which test they should use in determining what partial loss of the use of the eye this claimant had suffered.

They were still at liberty to make use of their experience, good sense and judgment in determining what the actual loss suffered in this case was. The Industrial Board may have been of opinion that the direct vision is the vision most essential to the employee engaged in hazardous employments, and that he is handicapped in his work to the extent that his direct vision is damaged, even though his field vision and binocular vision were normal.

"The award should, therefore, be affirmed."

The table of the Medical Society of the State of New York alluded to in the decision quoted above, has not been adopted officially by the Industrial Board. Since it bears a close connection with this case it is reproduced herewith.

A committee of the Medical Society of the State of New York[1] (Dr. A. C. Snell, chairman) in 1920 submitted a table of percentage vision and of visual disability. The three main factors in vision are "computed in the proportion of 2/5 for central visual acuity, 2/5 for field vision and 1/5 for stereoscopic (binocular single) vision." The table is as follows:

TABLE 19: TABLE OF PERCENTAGE VISION AND OF VISUAL DISABILITY

Record of central visual acuity at twenty feet	Percentage of central visual acuity	Percentage of average stereoscopic vision	Percentage of average field vision	Total vision*	Percentage of total visual loss
20/ 20.....	100	100	100	100	0
20/ 25.....	92	100	100	97	3
20/ 32.....	84	100	100	93.5	6.5
20/ 40.....	76	90	100	88	12
20/ 50.....	68	80	100	83	17
20/ 65.....	60	70	90	74	26
20/ 80.....	52	60	80	65	35
20/100.....	44	50	70	56	44
20/125.....	36	40	60	46	54
20/160.....	28	30	50	37	63
20/200.....	20	20	40	28	72
20/250.....	12	10	30	19	81
20/320.....	4	10	20	10	90
20/400.....	0	0	10	4	96
10/250.....	0	0	0	0	100

*Central vision=2/5; stereoscopic vision=1/5; field vision=2/5.

The importance of the eye to the workman in establishing his earning capacity, and its susceptibility to injury give it an important place in industrial accidents and compensation matters.

[1]"Report of the Committee on the Computation of the Percentage of Ocular Disability due to Injury." *New York State Journal of Medicine*. Vol. 20, No. 6, June, 1920, p. 198.

What Constitutes Loss of an Eye

The statutes of the various states provide specified compensation in the case of entire loss of vision but the courts and commissions are not always in agreement as to what constitutes loss of vision to the eye. The general rule, however, is that the vision must be reduced so as to be of no practical value for industrial purposes.

The Michigan Supreme Court[1] decided that when injury reduced vision to 5% of normal, the employee had lost the use of his eye and compensation was awarded, although there was no loss in earning power. The New Jersey courts[2] held that, "to fall within the loss of eyesight or an eye, it is not necessary that absolute blindness result it is sufficient that the sight is substantially destroyed." The Oklahoma commission[3] considered reduction of vision to 16% normal to be equivalent to loss of use of the eye, saying, "when the vision is so weak that the eye is of no use for practical purposes such impairment of sight amounts to loss of the use of the eye"; but in the same state claim[4] for the loss of an eye where one-third of vision remained was denied as not sufficient to entitle the injured to compensation for the loss of an eye.

In Connecticut[5] an explosion injured both eyes of a workman, so that the left retained only perception of light and the vision of the right eye was reduced to one-tenth normal. Compensation was awarded for permanent total disability, as the workman was unable to continue in his employment.

The Wisconsin commission[6] awarded compensation for permanent total disability in a case where burns had injured the eyesight so that, according to medical testimony vision of the right eye was reduced to 16/200 and of the left to 10/200 without possibility of correction. Although the workman had protective vision, both eyes were "industrially blind."

Loss of vision to the extent that the employee was able only

[1] *Stammers* v. *Banner Coal*. 183 N. W. 21.
[2] *Feldman* v. *Brownstein*. 93 Atlantic 679.
[3] *Roberts* v. *Folsom Morris Coal Mining Co*. Oklahoma. Industrial Commission Reports. Vol. 2, p. 272.
[4] *Zaione* v. *Rock Island Coal Mining Co*. Oklahoma. Industrial Commission Reports. Vol. 2, p. 208.
[5] *Howley* v. *Scovill Mfg. Co. Weekly Underwriter*. Vol. 106, No. 11, March 18, 1922, p. 595.
[6] *Wm. Duckow* v. *Nestle's Food Co*. Wisconsin. Industrial Commission. 9th Annual Report, p. 72.

to distinguish light and moving objects was held to be total loss of an eye in Illinois.[1]

In a Pennsylvania[2] case where the vision of the injured eye was reduced to 20/70, claim for compensation was refused. It was held that the workman had not lost his eye. In this case the measure of use was that should the claimant lose the use of his uninjured eye, he would still be able to carry on his employment.

In another case the Pennsylvania board[3] held that when the portion of sight remaining was of no practical benefit to the workman in his employment he had lost the eye. Also an injury not affecting the eyeball itself but closing the tear duct, causing tears to overflow on the face and blurring vision, was compensated as loss of the eye by the same board.[4]

An award for loss of an eye was affirmed by the Colorado Supreme Court[5] where 90% of vision was gone. In this case the question was one of percentage of disability and not one of percentage of blindness. The vision remaining in the eye was held to be of no practical use to the workman.

Under the present New York law compensation for loss of 80% or more of the vision of an eye shall be the same as for loss of an eye. This invalidates the rule established by the board and courts in earlier cases, especially the leading case of *Boscarino* v. *Carfagno and Dragonette*, 220 N. Y. 323, in which the medical testimony showed 80% loss of vision. In this case the Court of Appeals held:

> "If the claimant still has vision in the eye, which equals twenty per cent of normal, he is very far from having lost the use of the eye and no amount of argument can add much to the force of that bare statement."

It is a part of the law in Connecticut, Massachusetts, Maine and Indiana that reduction to one-tenth of normal vision with glasses is compensable as loss of an eye. All other states, except New York as noted above, leave the question as to what constitutes loss of vision to the discretion of the commissioners.

[1] *Bouregard* v. *Tichener*. Illinois. Industrial Board. Bulletin No. 1, p. 8.
[2] *Cavalo* v. *Pennsylvania Coal Co*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 207.
[3] *Brown* v. *Bessemer & Lake Erie*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 204.
[4] *Eberle* v. *Worthington Pump & Machinery Co*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 4, p. 404.
[5] *Employers' Mutual Insurance Co*. v. *Industrial Commission*. 199 Pacific 482.

However, in Rhode Island[1] where vision was reduced to 10% of normal and claim was made for loss of the eye on the ground that it would no longer serve to earn the employee a living in any occupation, the court did not agree, but held "the words of the statute are clear, and to be compensated for loss of an eye one must suffer entire and irrecoverable loss."

In a case before the Illinois board,[2] the vision was reduced to 10% of normal, and although with glasses vision was increased to 25%, the board said: "Either with or without glasses the employee suffered what amounts to loss of eye for practical working purposes."

Partial Loss of Vision

At present, in twenty-four of the compensation acts,[3] provision is made for proportionate awards on account of partial loss of vision, but without this stipulation in the statute this matter is left to the interpretation of the courts and commissions.

A Connecticut commissioner[4] in an early case maintained that the workmen's compensation law of that state took no cognizance of partial loss of vision, but awarded compensation for such an injury on the basis of loss of earning capacity. The law as amended now permits proportionate awards. The same ruling was made by the Pennsylvania board[5] where it was held that compensation cannot be awarded for fractional loss of vision but only for permanent loss of the eye, or for reduction in earning power. In this case there was no permanent loss of the eye or of earnings and consequently there was no award. The Michigan Supreme Court made a similar ruling[6] in reversing an award of the industrial commission, but added the comment that the proportionate award of the commission

> "was a very equitable one and is one which we would prefer to sustain if we could do so without attempting to amend the

[1] *Keyworth* v. *Atlantic Mills*. 108 Atlantic 81.
[2] *Skaja* v. *Benjamin Electric Co. Weekly Underwriter*. Vol. 96, No. 13, March 31, 1917, p. 441.
[3] Alabama, Colorado, Connecticut, Delaware, Georgia, Idaho, Illinois, Indiana, Iowa, Maine, Maryland, Minnesota, Nebraska, New Jersey, New York, Nevada, Ohio, Oregon, Tennessee, Vermont, Washington, West Virginia, Wisconsin, Wyoming.
[4] *Haughtland* v. *Howe*. Connecticut. Compensation Decisions. Vol. 1, p. 401.
[5] *Bock* v. *Pittsburgh & Lake Erie R.R.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 202.
[6] *Hirschkorn* v. *Fiege Desk Co.* Michigan. Industrial Accident Board. Workmen's Compensation Cases. July, 1916, p. 206.

law by judicial construction. We think the relief in such cases lies with the Legislature rather than with the courts."

In Wisconsin[1] however, four-fifths loss of vision entitled the workman to four-fifths compensation for the loss of an eye. The Oklahoma commission[2] in March, 1919, awarded compensation in proportion to the loss of vision. A similar ruling was made by the Virginia commission[3] allowing one-third of the statutory allowance for one-third loss of vision. Also the Idaho board[4] made a proportionate award for 25% loss of vision.

The Minnesota Supreme Court[5] affirmed an award for 68% loss of vision, compensation being proportionate to the loss of sight, and an award for one-third of loss of use of an eye was upheld by the New Jersey court.[6] However, when acid splashed into the eye, resulting in 50% loss of vision, the Delaware board[7] denied compensation for partial loss of eyesight and awarded compensation only for temporary disability because the injury did not result in loss of earning capacity.

A peculiarity of the Ohio statute is the provision that in case of partial loss of sight "no award shall be made for less than 25% loss of vision."

One-Eyed Workmen

There is a conflict in the decisions of the courts as to compensation in the case of a workman, who having previously lost the sight of one eye, by a new accident loses his remaining eye and becomes totally blind. Some jurisdictions hold that by becoming blind the workman is totally and permanently incapacitated for work and entitled to compensation accordingly. Other courts do not consider the previous injury and award compensation for the loss of one eye only.

In making an award for total incapacity on account of loss of the remaining eye, the Massachusetts Supreme Judicial Court[8] in a leading case said:

"The employee, when he entered the service of the subscriber, had that degree of capacity which enabled him to do

[1] *Stoughton Wagon Co.* v. *Myre.* 157 N. W. 522.
[2] *Zaionc* v. *Rock Island Coal Mining Co.* Oklahoma. Industrial Commission Reports. Vol. 2, p. 208.
[3] *Estep* v. *Stonega Coke & Coal Co.* Virginia. Industrial Commission. Opinions. Vol. 1, p. 200.
[4] *Baumgartner* v. *Hendricks.* Idaho. Industrial Accident Board. 2nd Report, p. 81.
[5] *Chiovitte* v. *Zenith Furnace Co.* 181 N. W. 643.
[6] *Johannsen* v. *Union Iron Works.* 117 Atlantic 639.
[7] *Spr* v. *General Chemical Co.* Delaware. Digest of Workmen's Compensation Cases. 1918-1919, p. 23.
[8] *In re Branconnier.* 111 N. E. 792.

the work for which he was hired. That was his capacity. It was an impaired capacity as compared with the normal capacity of a healthy man in the possession of all of his faculties. But nevertheless it was the employee's capacity. It enabled him to earn the wages he received. It (the act) fixes no method for dividing the effect of the injury and attributing a part of it to the employment and another part to a pre-existing condition and it gives no indication that the legislature intended any such division. The total capacity of this employee was not so great as it would have been if he had had two sound eyes. His total capacity was thus only a part of that of the normal man. But the capacity which he had has been transformed into a total incapacity by reason of the injury. The result has come to him entirely through the injury."

A similar decision was made in New Jersey[1] where the court overruled the contention that a one-eyed workman who became totally blind had lost but one eye as a result of the accident. It was held that this was too literal an application of the letter of the statute and inconsistent with the spirit of the workmen's compensation act.

"As a remedial act it should be liberally construed, and applying this rule, we are clear as respects major injuries, like the loss of an eye, an arm, or a leg, that the Legislature was dealing with a situation in which the other eye, arm, or leg would still be available. . . . . The trial judge was manifestly entitled to find that petitioner had suffered a total loss of the function of vision, and that this entitled him to the same compensation as a disability produced by the loss of both eyes."

The Supreme Court of Louisiana[2] has made the same ruling, saying:

"It stands to reason that the workman is as totally disabled for work by the loss of one eye as by the loss of two, if he had but one, and by the impairment of the sight as much as by the loss of it, if the impairment be to such a degree as to disable entirely from work. In speaking of workmen being only partially disabled from the loss of one eye, one arm, or one foot, this employers liability act has reference evidently to the normal man having both eyes, arms, or feet."

The Rhode Island court[3] followed the same reasoning.

In a Connecticut case,[4] the court did not take into consideration the extent of the injury but the extent to which the claimant was incapacitated by the injury, and an award was made for total incapacity. In an opinion of the Attorney General of Ohio[5] under the provisions of the Ohio act an employee

[1] *Combination Rubber Mfg. Co.* v. *Court of Common Pleas.* 115 Atlantic 138.
[2] *Brooks* v. *Peerless Oil Co.* 83 Southern 663.
[3] *In re Coats.* 103 Atlantic 833.
[4] *Fair* v. *Hartford Rubber Works.* 111 Atlantic 193.
[5] Opinions Ohio Attorney General. 1915, Vol. 1, p. 561.

having but one eye and losing that through an injury sustained in the course of his employment, was held to have suffered a permanent total disability. The same rule has been adopted in the Idaho courts;[1] and also by the West Virginia commissioner.[2]

Contrary to the above decisions, the Supreme Court of Minnesota[3] affirmed an award for loss of one eye independently of the previous loss of the other eye. Also a Pennsylvania court,[4] by a very literal adherence to the statute, awarded compensation for loss of one eye, although by the injury the workman became totally blind. The court said:

> "That the Workmen's Compensation Act is remedial legislation and therefore to be liberally construed is true, and were there a way open for such construction of our statute, now in question, the undoubtedly hard case and helpless condition of the appellant would impel us to aid him."

In a case before the Supreme Court of Indiana[5] the court, in awarding compensation for one eye, was of the opinion that

> "It is inaccurate to say that the injury resulted in total blindness. The industrial injury plus the injury received in childhood resulted in total blindness. The legislature did not intend that industry should be chargeable on account of an injury to an eye which occurred long before the workman came to that industry."

An important Michigan[6] decision makes an award for partial disability, on the theory that

> "The loss of second eye standing by itself was also a partial disability and of itself did not occasion the total disability—the absence of either accident would have left the claimant partially incapacitated. We think it clear that total incapacity cannot be entirely attributed to the last accident."

The same ruling was also made in another Michigan case.[7]

In Iowa the commissioner departed from the above rulings, and on account of loss of the remaining eye made an award for permanent total disability, but deducted the compensation which would have been paid the employee for loss of the first eye had it been an industrial accident, on the reasoning that, although the disability was total, the extent of injury was less than would have been the loss of two eyes in the same accident.

[1] *McNeil* v. *Panhandle Lumber Co.* 203 Pacific 1068.
[2] *Price* v. *Harvey Coal Co. Weekly Underwriter.* Vol. 93, No. 4, July 24, 1915, p. 115.
[3] *State ex rel Garwin* v. *District Court of Cass County.* 151 N. W. 910.
[4] *Klein* v. *Oliver Iron & Steel Co.* 1 Mackey 147.
[5] *Stevens* v. *Marion Machine Co.* 133 N. E. 23.
[6] *Weaver* v. *Maxwell Motor Car Co.* 152 N. W. 993.
[7] *Collins* v. *Albrecht Co.* 180 N. W. 480.

The Iowa Supreme Court[1] in affirming this award, commented that: "It was an effort on the part of the commission to attain equity."

Loss of Defective Eye

Where eyesight is previously impaired, destruction of remaining vision of an eye is generally compensated for as the complete loss of an eye. The Vermont commissioner[2] ordered full compensation where the sight of an eye with cross vision was destroyed. Although the employee had only 50% vision in his injured eye it was a usable eye, sufficient for the work to which he subjected it.

In a leading case in New York,[3] full compensation was awarded to a claimant who was near-sighted but still had 50% vision. On the theory that her earning capacity and the wages received by her must be considered her wage earning capacity with defective vision, the court held: "She lost the use of her eye such as she had and is entitled to compensation therefor."

An extreme case, perhaps, is that decided by the Michigan Supreme Court,[4] where an award was made for loss of an eye although it had been impaired in infancy, leaving only ability to distinguish light and moving objects.

The Industrial Commission of Wisconsin[5] awarded compensation for loss of an eye where the remaining 27% vision was lost, reasoning that "the loss of the last 27% of an eye is a far greater loss than that of the first 27% of normal sight," and that "the legislature did not specify blindness of a 'normal eye' or a '100% eye.' It undoubtedly intended the total blindness of an eye which performed the function of a normal eye."

The contrary opinion holds in a ruling of the Virginia commission[6] in a case where the eye lost by enucleation was estimated to have had 25% normal vision and compensation was allowed for 25% of the statutory provision for loss of an eye.

Likewise in Kentucky[7] the award was made only for the

[1] *Jennings* v. *Mason City Sewer Pipe Co.* 174 N. W. 785.
[2] *Branchi* v. *Branchi Granite Co. Weekly Underwriter.* Vol. 98, No. 4, January 26, 1918, p. 120.
[3] *Hobertis* v. *Columbia Shirt Co.* 173 N. Y. Supp. 606.
[4] *Purchase* v. *Grand Rapids Refrigerator Co.* 160 N. W. 391.
[5] *Mildenberger* v. *Pawling.* Wisconsin. Industrial Commission. 7th Annual Report, p. 64.
[6] *Frazier* v. *McCorkie.* Virginia. Industrial Commission Opinions. Vol. 1, p. 190.
[7] *Catron* v. *Wood Oil Co.* Kentucky. Workmen's Compensation Board. Leading Decisions. Vol. 1, p. 48.

percentage of vision lost. Here the vision in an eye by a previous injury was reduced to 15% of normal and because of a second injury this 15% of vision was lost.

The Supreme Court of Minnesota[1] does not consider the loss of an eye with 50% vision as equivalent to the loss of an eye. In this case the workman, having previously lost 50% vision in one eye, became totally blind. The court overruled the contention of the employer that compensation be awarded separately, 50% for the defective eye and 100% for the good eye, neither would the court sustain the claim of the workman that he had suffered permanent total disability. The decision was based on the provision of the statute covering "all other cases of permanent partial disability not enumerated" in which compensation continues for a period not exceeding three hundred weeks. In this case the court held to the reasoning that vision in two eyes being equal, loss of 50% of the vision of one eye reduced total vision 25%; and in an accident involving total loss of sight of the eye with normal vision, with destruction of the vision remaining in the defective eye, the injured person has suffered a 75% loss of vision, and compensation was awarded accordingly.

Loss of Crystalline Lens

An unfortunate eye accident is the loss of the lens, which results in loss of binocular vision—that is, inability to use one eye in conjunction with the other. The New York law[2] alone specifically enumerates that the loss of binocular vision shall be equivalent to loss of the eye.

Decisions of courts and commissions have been generally uniform in holding the loss of the lens to be total loss of use of the eye for industrial purposes. Leading cases are found in Massachusetts,[3] Minnesota,[4] Illinois,[5] New York,[6] and Pennsylvania.[7]

In the Illinois case, noted above, the contention was made that the lens did not furnish sight but only accommodation to distance and that actual sight remained in the injured eye

[1] *State ex rel Melrose Granite Co.* v. *District Court, Seventh Judicial District.* 173 N. W. 857.
[2] Workmen's Compensation Act, 1922. Sec. 15, Subd. 3-p.
[3] *In re O'Brien.* 228 Mass. 211.
[4] *Butch* v. *Shaver.* 184 N. W. 572.
[5] *Juergens* v *Industrial Commission.* 125 N. E. 337.
[6] *Smith* v. *F. & B. Construction Co.* 172 N. Y. Supp. 581.
[7] *Luton* v. *Glenn Brook Coal Mining Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 149.

which could be of value if the other eye became blind. To this the court answered:

> "We are of the opinion that the legislature did not intend that when a man has lost use of one eye he should nevertheless be deprived of compensation for that loss because he might be unfortunate enough to lose the other eye and thereby gain a certain limited use of the first injured eye. The question before this court is whether or not this man has for all practical uses and probabilities lost his eye. The application of loss of this character should not be made to depend upon fine spun theories based upon scientific technicalities but should be given practical construction and application. For all practical purposes when a person has lost sight of an eye he has lost the eye."

Also quoting from the Massachusetts case above referred to, the court said:

> "By covering the good eye, the vision of the injured eye alone, with a glass, is nearly normal. This cannot be utilized when he uses the normal eye and the corrected eye together, as there is a lack of coordination or correlation, a sort of double vision. No glass that he could get for the injured eye would give him fused vision with the good eye. The result is that when both eyes are used together glasses are impractical.
>
> "The decision of the Industrial Board was that the employee has sustained a reduction of vision in the injured eye to one-tenth of normal with glasses. They reached this conclusion by taking into consideration the vision of the right eye as compared with the vision of both eyes used together. In doing so we think the board correctly interpreted the intention of the legislature.
>
> "The construction contended for by the insurer would lead to the unreasonable result of allowing compensation for the loss of an eye, but none for an injury that rendered the eyes worse than useless."

Infection in Eye

Michigan furnishes two leading cases[1] covering eye infection. In the McCoy case the injured employee was afflicted with gonorrhea at the time of injury to his eye, and by rubbing the eye, infection set in. The court held that infection could have taken place without the injury and the loss of the eye was, therefore, due directly to infection caused by gonorrhea and not from a risk incident to the employment. In the Cline case the employee was free from disease at the time of accident and the gonorrheal germ must have entered his injured eye from some outside source. It was held that:

[1] *McCoy* v. *Michigan Screw Co.* 147 N. W. 572.
Cline v. *Studebaker.* 155 N. W. 519.

"an injured eye is more susceptible to the infection than a normal eye and with the further fact, that at once after the accident a fellow workman examined the eye using for the purpose a match wrapped with a piece of cloth, create a considerable degree of probability that the germ got into the eye in the attempt to remove the steel, and this probability was sufficient to warrant the Board in their finding that the infection which destroyed the sight of the eye, is not reasonably accounted for except as coming through or resulting from the accident."

In a Wisconsin case,[1] something entered a workman's eye, causing pain, and according to the decision of the commission,

"he rubbed the eye; gonorrheal infection followed. He did not have the infection previously. We cannot determine whether the infection in the eye came from the substance which fell into it, or from the water with which he bathed it, or from a towel with which he rubbed it, but in either event we regard the dropping of the substance in the eye as the legal cause of the subsequent loss of sight within the meaning of the compensation act."

In reviewing this decision the Supreme Court held that if the above reasoning be correct,

"then any man at work at any occupation who gets something in his eye while at work and rubs the eye, the rubbing being followed by gonorrheal infection, may recover for the loss of eye simply on producing evidence of these facts together with evidence tending to show that he did not have gonorrheal infection previously. We cannot agree that this is good law. It bases liability on conjecture. People who have suffered no such mishaps, also wash their faces and wipe their eyes with towels daily as a matter of course, and it is a well known fact that the gonorrheal infection waits not upon the inflammation or injury to make its entry into the eye."

In a Minnesota case,[2] a miner was injured when a particle of ore flew into his eye and gonorrheal infection resulted in loss of eyesight. The court, in awarding compensation, said:

"There can be no serious doubt that the facts as claimed by the workman, disclose an accidental injury within the meaning of the compensation statute. And this, whether the gonorrheal infection resulted from the use of a soiled handkerchief in removing the particle from the eye, or from washing the eye with water from the trough which was used indiscriminately by the miners, or from a latent germ within the eye set in motion and made active by the violence of the injury to the eyeball."

In another interesting award by the California commission[3] the

[1] *Voeltz* v. *Industrial Commission*. 152 N. W. 830.
[2] *State ex rel Adriatic Mining Co.* v. *District Court of St. Louis County*. 163 N. W. 755.
[3] *Smith* v. *Crescent Theater*. California. Industrial Accident Commission. Decisions. Vol. 8, p. 21.

employee, a cashier in a theatre patronized largely by foreigners, claimed the infection of trachoma in her eyes was transmitted through the handling of money. Award was made because her employment unusually exposed her to the infection.

Where the employee, while suffering from trachoma, was struck in the eye by a piece of ore and became blind, a Minnesota court[1] held that blindness was due to disease alone and not contributed to or aggravated by the injury. A similar ruling is found in the Kentucky reports.[2]

Enucleation

The statutes of Montana, Idaho, Utah and Wisconsin allow twenty weeks more compensation for enucleation of the eye than when the injury results in loss of vision only. (See table, page 205.) New Mexico makes a difference of ten weeks' compensation and Nevada five months' compensation between mere blindness and the removal of the eyeball. In Washington the award for enucleation is $1,200, whereas blindness to an eye is compensated at $900. In Kentucky,[3] where the act makes no such distinction, an additional twenty weeks was compensated because of disfigurement from loss of eyeball, even though replaced with a glass eye.

On the contrary, in a Pennsylvania ruling,[4] an eye which retained only the perception of light and darkness, was removed by enucleation on account of injury. The board denied compensation on the ground that there was no loss of an eye when it was already blind.

Use of Glasses

Under the laws of Connecticut, Massachusetts, Maine and Indiana, in computing the loss of vision, the improved vision by the aid of glasses is the basis of the award. In other states this is a matter of interpreting the legislative intent by the court or commission.

The effect of glasses to correct and improve the vision damaged by injury is taken into consideration in a Michigan case[5] which reads:

[1]*Churchich* v. *Oliver Mining Co.* Minnesota. Department of Labor and Industries. Bulletin No. 17, p. 86.
[2]*Slaven* v. *Stearns Coal & Lumber Co.* Kentucky. Workmen's Compensation Board. Leading Decisions. Vol. 3, p. 83.
[3]*Nelson* v. *Kentucky River Stone and Sand Co.* 206 S. W. 473.
[4]*Quinn* v. *Shipbuilding Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 462.
[5]*Cline* v. *Studebaker.* 155 N. W. 519.

"The net result is that, when using proper glasses, the claimant had 50% of his sight, while without them he has only 10%. The evidence will not permit of any different conclusion.

"Under the circumstances it seems impossible to say that the injury has resulted in the loss of the eye. The use of glasses is a very ordinary occurrence, both for the young and the old. It is unnecessary to determine whether the loss of 90% of the sight is substantially the loss of the eye because that is not the present case. Ninety per cent of the sight is not lost when it can be diminished to 50% by use of common appliances. And it is the duty of the sufferer to minimize his injury as much as he reasonably may."

In New York[1] an award was made for loss of an eye, although with the aid of powerful glasses the claimant had about one-third vision in such eye. But another New York case[2] held that "there is no loss of eye, when eye with aid of proper glasses is nearly normal for many purposes." And in a later New York decision[3] where the claimant had lost one-third of the vision of one eye it was held that where the loss of vision may be corrected or supplied by the use of glasses, no award can be made therefor, even though it was inconvenient for injured employee to use glasses in his work.

When the injury resulted in diplopia or double vision, which condition was remedied by the use of glasses with a special prism, the Idaho board[4] awarded compensation for one-third loss of the eye. This was done on the advice of an impartial oculist, although the employee claimed that, as he could do nothing without his glasses, the award should be larger.

In Illinois[5] an employee lost all but 10% of the vision of one eye. By means of corrective glasses, this was increased to 25%. The board held that either with or without glasses, the employee suffered what amounts to loss of eye for practical working purposes.

The Pennsylvania board[6] was of the same opinion, holding that glasses were no part of the physical structure of the body.

"We are not to consider the usefulness of the eye with the aid of artificial means, but are to consider the usefulness of the naked eye."

[1] *Smith* v. *F. & B. Construction Co.* 172 N. Y. Supp. 581.
[2] *Valentine* v. *Sherwood Metal Working Co.* 189 App. Div. 410.
[3] *McNamara* v. *McHarg Barton Co.* 192 N. Y. Supp. 743.
[4] *Craig* v. *Hecla Mining Co.* Idaho. Industrial Accident Board. 2d Report, p. 81.
[5] *Skaja* v. *Benjamin Electric Co. Weekly Underwriter.* Vol. 96, No. 13, March 31, 1917, p. 441.
[6] *Luton* v. *Glenn Brook Coal Mining Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 149.

Use of Goggles to Protect Eye

We find two illustrative contested cases. In a California case[1] an employee was struck in the eye by a flying chip of metal because he had neglected to use his goggles, although the employer had a strict rule, given by oral and printed notice, that workmen should wear goggles. It was held that the employee was negligent and compensation was reduced one-half.

On the contrary, the Industrial Commission of Wisconsin[2] awarded compensation for 15% in addition to the regular amount for loss of an eye because of the employer's negligence. While filling a bottle with charged water the bottle burst and glass flew into the eye of the employee. Although there was a notice posted requiring the wearing of goggles, the employer did not enforce the rule or make an effort to supply the men with them.

In other cases where the question of negligence in omission of the use of goggles is raised, the general rule is that such negligence on the part of the employee is not willful and therefore not a defense under the workmen's compensation acts.

Miscellaneous Eye Injuries

The Iowa commissioner[3] awarded compensation to a workman who lost an eye as a result of contact with dust and pollen while engaged in cutting weeds with a scythe.

Cataract of the eye, when caused by trauma, was compensated by the California Commission,[4] but a similar claim for compensation because of traumatic cataract was dismissed by the Indiana Supreme Court[5] because the injury was to the eyelid alone and did not penetrate the eyeball.

An employee sustained an injury to his right eye which made its removal by operation necessary, and due to traumatic neurosis or hysterical blindness, the remaining eye became blind. The New York court,[6] in sustaining an award for permanent total disability, said:

> "It is not important that the claimant has an uninjured physical equipment with which he *should* but *cannot* see.

[1] *Weston* v. *Hendy Iron Works*. *Weekly Underwriter*. Vol. 102, No. 24, June 12, 1920, p. 1032.

[2] *Kraska* v. *White Rock Mineral Springs*. Wisconsin. Industrial Commission. 9th Annual Report, p. 28.

[3] *Blackburn* v. *City of Dubuque*. Iowa. Workmen's Compensation Service. 4th Biennial Report, p. 101.

[4] *Ready* v. *City of Oakland*. California. Industrial Accident Commission. Decisions. Vol. 4, p. 89.

[5] *League* v. *Weidley Motors Co*. 135 N. E. 265.

[6] *Weber* v. *Haiss Mfg. Co*. 191 App. Div. 12.

> After all, a man sees with his brain, not with his eyeball or his optic nerve, and if an operation performed upon an eye so affects the mind, the nerves, or even the imagination, that a man genuinely loses vision with his other eye, then the faculty of sight has been more directly attacked than when assailed through the mechanical contrivances by which it functions."

Corneal ulcer in the eye, causing partial loss of vision, was compensated in California.[1] The employee was a patrolman of an electric power line on the desert and the injury came as a result of constant exposure to sand, dust and wind in all kinds of weather. The commission held that there was a special risk of exposure by reason of the employment.

Detachment of retina of an eye as a result of strain in heavy lifting was held a compensable injury in Massachusetts.[2] In a California case[3] an employee afflicted with myopia (near-sightedness), suffered a slight blow on the temple, resulting in detachment of the retina. The medical evidence was to the effect that detachment of the retina can occur in an eye affected with myopia by reason of a very slight blow or jar, and that if the employee's eye had not been so affected, the blow would not have produced loss of vision. It being the commission's judgment that the pre-existing disease of myopia and the blow contributed equally to the resultant condition of the eye, an award was based on one-half of the permanent disability rating for the results of the accident. This is in accordance with a provision of the California act[4] which requires that, in cases of aggravation of pre-existing disease, compensation be allowed only for such portion of the disability as may be attributed to the injury.

[1] *Bisbee* v. *Southern Sierras Power Co.* California. Industrial Accident Commission. Decisions. Vol. 7, p. 20.
[2] *In re Sullivan.* 134 N. E. 393.
[3] *Houlihan* v. *Nelson Mfg. Co.* California. Industrial Accident Commission. Decisions. Vol. 7, p. 151.
[4] California Compensation Act; Sec. 3, Par. 4.

XXVII

HERNIA

Twelve states[1] have passed legislation defining the cardinal principles which must underlie an action for compensation for hernia. In general, proof is demanded of three things:

(1) That there was an injury resulting in hernia;

(2) That its appearance was sudden and accompanied by pain;

(3) That the hernia immediately followed the accident and that it did not exist in any degree prior to the accident.

The law of New Jersey imposes the additional requirements that there must be such prostration that the employee had to cease work immediately, that the effects were of such severity that they were noticed by the claimant and communicated to the employer within 24 hours, and that there was such physical distress that a licensed physician was called to attend the case within 24 hours after the occurrence of the hernia.

The statutory provisions of these twelve states are presented in Table 20.

Provisions for Treatment

The laws of five states[2] are mandatory regarding treatment of hernia by radical operation. The laws in these states provide that cases of hernia "shall" be treated by surgical operation, in order for the claimant to receive compensation. This provision is modified by saying that if the physical condition of the claimant or his age is such that an operation of this kind would be attended with unusual risks to life, he shall be compensated during the period of disability without an operation. Unreasonable refusal to submit to an operation to relieve and cure the hernia automatically cuts off compensation benefits, and if the hernia should subsequently become strangulated and death result, no claim for compensation will be permitted. The Oregon law provides that a person must submit "forthwith" to radical operation for cure and, in event of his refusal, neither he nor his

[1]Alabama, Colorado, Georgia, Idaho, Kentucky, Montana, New Jersey, New Mexico, Oregon, Texas, Virginia, West Virginia.

[2]Alabama, Georgia, Oregon, Virginia, West Virginia.

TABLE 20: PROVISIONS OF WORKMEN'S COMPENSATION LAWS COVERING COMPENSATION FOR HERNIA

(National Industrial Conference Board)

State	Requirements (See below)	Miscellaneous Provisions
Alabama	1-2-3-4-5-10	.....
Colorado	3-4-12	Operation fee $50.
Georgia	1-2-3-4-5-10-11	.....
Idaho	1-2-4-5	.....
Kentucky	1-2-4-5-11	Operation provided with $200 expense and 26 weeks' disability. Refusal of operation for physical reasons entitles to compensation during entire disability. Unreasonable refusal limits compensation to one year.
Montana	3-4-5-6-12	Operation fee $50.
New Jersey	1-2-3-7-8-9-11	Refusal of operation entitles employee to cost of truss and twenty weeks' compensation. Operation entitles employee to $150 medical expense and disability payments.
New Mexico	3-4-5-6-12	Operation fee $75.
Oregon	4-5-10	Operation entitles employee to 42 days' disability payments. Refusal of immediate operation bars all benefits under act.
Texas	1-2-3-4-5-11	Operation and 26 weeks' disability allowed. Refusal after board's physician finds employee fit for operation limits compensation payments to one year.
Virginia	1-2-3-4-5-10-11	.....
West Virginia	1-2-3-4-5-10-11	.....

1—That there was an injury resulting in hernia.
2—That the hernia appeared suddenly.
3—That it was accompanied by pain.
4—That the hernia immediately followed an accident.
5—That it did not exist prior to accident.
6—That hernia was of recent origin.
7—Such prostration that employee stopped work immediately.
8—Fact communicated to employer within 24 hours.
9—Distress so severe that doctor was called within 24 hours.
10—All hernia cases shall be treated in surgical manner by radical operation. No compensation during period of refusal of operation unless physical condition is such that an operation is considered unsafe.
11—Death resulting from operation compensated as death from injury.
12—Strangulation after refusal of operation is not compensable.

beneficiaries are entitled to compensation benefits. The Kentucky and Texas laws provide that, in case of unreasonable refusal to submit to an operation, benefits shall be limited to one year; while if an operation is accepted, costs of the same together with disability payments for 26 weeks shall be allowed. In Oregon disability payments shall be made for 42 days following operation in addition to the operating costs.

The laws of Colorado and Montana provide that an operating fee of $50 shall be allowed, which amount is raised to $75 in New Mexico. In New Jersey the medical and surgical expense of an operation for which the employer is held liable is $150 in addition to the disability payments. The employer is relieved of all medical and surgical expense, but is held for compensation

only, if the employee refuses the services of the employer's physician. (See Tables 6 and 7).

Commission Rules on Hernia

Rules of commissions regarding hernia which have the force of law have been promulgated in a few states. Thus, in Iowa, hernia is compensable only to able-bodied workmen who become disabled to the extent of requiring prompt surgical treatment due to some definite accident or incident arising out of the employment.

The Nevada and Ohio Commissions have divided hernia into two classes, traumatic and non-traumatic. The Nevada rules state that

"Rule I: Real traumatic hernia is an injury to the abdominal (belly) wall of sufficient severity to puncture or tear asunder said wall, and permit the exposure or protruding of the abdominal viscera or some part thereof. Such an injury will be compensated as a temporary, total disability, and as a partial permanent disability, depending upon the lessening of the injured individual's earning capacity.

"Rule II: All other hernia, whenever occurring or discovered and whatsoever the cause, except as under Rule I, are considered to be diseases causing incapacitating conditions, or permanent partial disability; but the permanent partial disability and the causes of such are considered to be as shown by medical facts—to have either existed from birth; to have been years in formation, or both, and are not compensatory except as provided under Rule III.

"Rule III: All cases coming under Rule II, in which it can be proven:

First, that the immediate cause, which calls attention to the presence of the hernia, was a sudden effort or a severe strain or blow received while in the course of employment;

Second, that the descent of the hernia occurred immediately following the cause;

Third, that the cause was accompanied, or immediately followed by severe pain in the hernial region;

Fourth, that the above facts were of such severity that the same were noticed by the claimant and communicated immediately to one or more persons;

are considered to be aggravations of previous ailments or diseases, and will be compensated as such for time loss only and to a limited extent only, depending upon the nature of the proof submitted and the result of the local medical examination, but not to exceed two months."

The rules of the Ohio commission are as follows:

"Rule I: In all Hernia produced by external violence or traumatism, directly applied to the abdominal or belly wall, puncturing or tearing the wall asunder, compensation shall be paid during the full period of disability.

"Rule II: Hernia which occur during the course of employment but not superinduced by trauma and all pre-existing hernia are not compensable except as they may be aggravated by a contusion or other traumatism producing disability.

"Rule III: In all Hernia where it is conclusively shown by medical proof that the immediate cause which calls attention to its presence, as a sudden effort, severe strain, sudden jerk or fall; that the descent of the hernia took place immediately following the cause; that it was accompanied or immediately followed by pain at the seat of injury; that the pain was of such severity that the same was noticed by the claimant and communicated as soon as possible to one or more persons; that there was a tumor mass felt at the seat of injury; that there was swelling, inflammation and hemorrhage present in the tissues; that there was a few days subsequent, ecchymosis of the skin; that hernia produced in this manner and with such symptoms following, shall be compensated covering the full period of disability; that all medical fees including necessary operations, ambulance, nurse, or a suitable truss shall be paid. Where a truss is worn, should strangulation or other conditions of a disabling character arise dependent upon the existing hernia, disability arising from such conditions shall not be subject to compensation nor any further medical expense, except operative treatment and all medical expense necessary to the complete relief of the condition."

The policy of the Utah commission in relation to hernia is stated in Rule No. 36 of the Rules of Procedure of that body and is intended as a guide, but is not binding in all cases.

1. The issue of predisposition to hernia is regarded as unimportant.

2. Any hernia, whether complete or incomplete, resulting from strain or wrench or other industrial injury is compensable.
3. A chronic hernia, if injured or aggravated by injury, is not ordinarily compensable.
4. An incomplete hernia, that is merely incipient, subsequently completed through an independent injury, will ordinarily be compensable.
5. In hernia cases it is not necessary that the evidence must show an immediate collapse or disability on the part of the injured person. There should, however, be proof of pain or discomfort accompanying the alleged injury sufficient, at least, to cause pause and complaint, with corroboration, if possible.
6. A moderate permanent disability indemnity will be allowed for hernia in those cases where operation for the radical cure of the same is for any reason not advisable and the Commission will be disposed to approve any reasonable compromise and settlement between the parties in such cases.
7. In all cases of hernia in which the Commission shall find the injury remediable by operation the applicant will be awarded such operation as a part of the medical, surgical and hosptial treatment to which he is entitled to cure and relieve him from the effects of the injury. The expense thereof must be paid by his employer or insurance carrier. If the operation is not offered to the applicant he may secure it charging the reasonable expense to the employer or insurance carrier. In all such cases the applicant will be denied further compensation if he refuses either to accept or secure operative relief.

In addition to the provisions of the statutes and the official rules noted above, replies from sixteen other states[1] were received to an inquiry regarding the treatment of hernia cases in their jurisdictions. These reports in general show that in order to secure compensation it must be proved by the claimant that the hernia was the result of an accident and occurred in the course of the employment. California reports that pre-existing hernias are excluded from compensation, while in Pennsylvania they are included when aggravated or strangulated. Wisconsin also reports that hernias are divided into two classes as in Nevada and Ohio—accidental and pre-existing.

The Question of Accidental Injury

When the courts have been called upon to determine whether a hernia is compensable under the law, the general rule has been

[1]California, Indiana, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Montana, Nebraska, New York, North Dakota, Oregon, Pennsylvania, Vermont, Washington, Wisconsin.

followed that the hernia must be directly due to some accidental occurrence. Compensation was awarded in a New York case,[1] where the employee in lifting a heavy box felt a "snap" which resulted in hernia.

However, in another hernia case the same court[2] said:

> "It cannot be the purpose of the Workmen's Compensation Law to insure against some internal organ or part of the body giving way when an extra exertion is put forth by the employee to perform the task he is hired to perform; especially when nothing comes in contact with the body and when no slip or fall is experienced."

A similar decision was rendered by the Michigan Supreme Court[3] where an employee claimed to have sustained an inguinal hernia while lifting a block of timber weighing about 200 lbs. without slipping or falling or being struck by the timber. The court held that the injury was not accidental, and that nothing out of the ordinary happened; it was his duty to lift such timbers and he had lifted them before without injury.

In another Michigan case,[4] however, compensation was granted where the hernia was the result of an attempt to lift a heavy engine. A part of the decision in this case follows:

> "The statute seems to contemplate that an accidental injury may result by mere mischance; that accidental injuries may be due to carelessness, not willful, to fatigue, and to miscalculation of the effects of voluntary action. There is testimony in the record, although it is not conclusive, to support a finding that claimant was suddenly, and accidentally put to a disadvantage by the act of his fellow workman and the sticking of the engine on the concrete floor and that the rupture was caused by his efforts to retrieve his position and do his work. If it is also assumed that there was a certain lack of physical integrity in the parts when the injury was manifested, still I think claimant may have compensation for the injury he suffered."

Contrary to the above holdings that there must be an accident, a slip or fall, the Washington commission[5] found that the employee, in attempting to push a heavily loaded truck, did not sustain an accidental injury, but the State Supreme Court in overruling the commission said:

> "To hold with the Commission that if a machine breaks any injury to the workman is within the act, but if a man

[1] *Jordan* v. *Decorative Company*. 194 App. Div. 927.
[2] *Gentalong* v. *American Hide*. 194 App. Div. 9.
[3] *Tackles* v. *Bryant & Detwiler Co*. 167 N. W. 36. Also, *Kutschmar* v. *Briggs Mfg. Co*. 163 N. W. 933.
[4] *Robbins* v. *Original Gas Engine Co*. 157 N. W. 437.
[5] *Zappala* v. *Industrial Commission*. 144 Pacific 54.

breaks, any resulting injury is not within the act, is too refined to come within the policy of the act—for there can be no sound distinction between external and internal causes arising from the same act and producing the same result."

And in Wisconsin[1] the commission awarded compensation for accidental hernia where the workman was required to handle heavy bales of grass and while so employed suddenly suffered from hernia. The same decision is found in an Indiana case[2] where an award was made for hernia. The question of accident in this case is discussed as follows:

"Literally it [the statute] seems to indicate that there must be an accident external to the body of the workman, a mishap in the environment, which results in an injury to his body. In the case at bar there was no external accident, no mishap in the environment. The workman was doing his work in the natural, normal and regular way. He was doing his work exactly as he intended to do it. But the injury was accidental It was not expected, anticipated, foreseen, designed or intended. But it is so well settled as no longer to admit of argument that in cases like the one at bar where injury results from muscular strain and exertion the workman is entitled to compensation. To include cases of that character, the courts regard the words of the Statute 'personal injury by accident' as equivalent to the words 'accidental injury'."

The cases in this country holding that the occurrence of hernia through strain or heavy lifting alone, without the attending circumstance of a blow, a slip or a fall is compensable, take for their precedent the leading English case,[3] in which Lord MacNaughton says in part:

"[The claimant] was a man of ordinary health and strength. There was no evidence of any slip, or wrench or sudden jerk. It may be taken that the injury occurred while the man was engaged in his ordinary work, and in doing or trying to do the very thing he meant to accomplish.

"If a man, in lifting a weight or trying to move something not easily moved, were to strain a muscle, or rick his back, or rupture himself the mishap in ordinary parlance would be described as an accident.

"One other remark I should like to make. It does seem to me extraordinary that anybody should suppose that, when the advantage of insurance at employers' expense was being conferred on workmen, Parliament could have intended to exclude from the benefit of the act some injuries ordinarily described as 'accidents' which beyond all others merit favorable consideration in the interest of workingmen and employers alike. A man injures himself by doing some stupid thing, and it is called an accident, and, he gets the benefit

[1] *Ratzberg* v. *Deltox Grass Rug*. Wisconsin. Industrial Commission. 4th Annual Report, p. 34.
[2] *Terre Haute Malleable & Mfg. Co.* v. *Wehrle*. 132 N. E. 698.
[3] *Fenton* v. *Thorley*. 19 T. L. R. 684.

of the insurance. It may even be his own fault, and yet compensation is not disallowed unless the injury is attributable to 'serious and willful misconduct' on his part. A man injures himself suddenly and unexpectedly by throwing all his might and all his strength and all his energy into his work by doing his very best and utmost for his employer, not sparing himself or taking thought of what may come upon him, and then he is to be told that he exerted himself deliberately, and that there was an entire lack of the fortuitous element. I cannot think that this is right. I do think that if such were held to be the true construction of the act the result would not be for the good of the men nor for the good of the employers, either, in the long run. Certainly it would not conduce to honesty or thoroughness in work. It would lead men to shirk and hang back and try to shift the burden which might possibly prove too heavy for them on to the shoulders of their comrades."

An interesting case involving a question of hernia was heard by the New York board. While operating for hernia, a physician removed the appendix. Thereafter peritonitis developed, resulting in death. The board awarded death benefits as death was considered a direct result of accident producing the hernia. The state Supreme Court[1] reversed this award because they found the appendix operation was not necessitated by accident and the peritonitis was traced to the appendix operation.

Post-operative shock resulting in death in cases of hernia has been generally compensated but was denied in an unusual case in Maine.[2] Here the employee suffered through accident an epigastric hernia and when operated upon he asked the operating physician to operate for an inguinal hernia of long standing under the same anæsthetic. As it was conjectural whether the employee would have died from the shock of operation for the accidental hernia alone, compensation could not be recovered.

Hernia as a Pre-Existing Disease

Because hernia is rarely of traumatic origin but the gradual development of a physical weakness, a strong contention for denying compensation in hernia cases rests on the theory that it is the result of disease alone. Thus in a New York case,[3] a plasterer claimed to have overreached when plastering and felt a pain in the right side, resulting in strangulated right inguinal hernia with abscess formation. Although the majority of the court affirmed the award of the board on the ground that

[1] *Hoffman* v. *Pierce Arrow Motor Car Co.* 183 N. Y. Supp. 766.
[2] *Dulac* v. *Proctor & Gowie Co.* 114 Atlantic 293.
[3] *Francavilla* v. *Mitchell.* 194 App. Div. 929.

strain had aggravated a pre-existing condition, the dissenting opinion maintained that

> "Given a proper condition of diseased tissue any action on the part of the individual would be likely to bring the disease into manifestation as a localized pain but this does not meet the conception of a disease due to accident."

Whenever there is a strain through exertion or heavy lifting, a slip or fall, in other words an "accidental" occurrence immediately preceding the hernial protusion, compensation has been granted generally on the theory that it is an aggravation of a pre-existing disease. Thus in Wisconsin[1] the question arose whether the congenital condition rather than the subsequent strain was the cause of the hernia. This question was considered immaterial from a legal standpoint and the commission held that where an accident or strain causes a hernia, such accident or strain is the proximate cause of the hernia, even though the person was predisposed to it. A superior court in Pennsylvania[2] in affirming an award states that

> "Referee and Board find as a fact that in almost all cases of hernia except those caused by a direct blow upon a previously perfect abdominal wall, there was some previous imperfection of the abdominal wall, either congenital or the result of disease or a previous hernia. The Board holds as a matter of law, following the decision of English Courts of Appeal, the Industrial Boards of Illinois, Wisconsin and Michigan that where a strain causes a protusion of the bowels, it is a compensable injury even though the injury is at a point weakened as above stated."

The above ruling is found also in decisions of Connecticut,[3] California,[4] Colorado,[5] Massachusetts,[6] Michigan,[7] Illinois,[8] and Indiana.[9]

There are exceptions to the rule in Utah and Rhode Island. It was held in the Utah case[10] where the applicant had hernia for fifteen years, and suffered a severe protusion after a heavy

[1] *Mather* v. *Dudenhoefer*. Wisconsin. Industrial Commission. 5th Annual Report, p. 5.
[2] *Smith* v. *Pittsburgh Coal Company*. 71 Pennsylvania Superior Court 325.
[3] *Hartz* v. *Hartford Faience Co*. 97 Atlantic 1020.
[4] *Heinze* v. *Bowman Drug Company*. California. Industrial Accident Commission. Decisions. Vol. 6, p. 74.
[5] *Silvio* v. *American Smelting & Refining Company*. *Weekly Underwriter*. Vol. 96, No. 11, March 17, 1917, p. 383.
[6] *Gagnon* v. *Pike*. Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 4, p. 636.
[7] *Bell* v. *Hayes Ionia Co*. 158 N. W. 179.
Hurley v. *Selden-Breck Co*. 159 N. W. 311.
[8] *Niles* v. *Ft. Dearborn*. *Weekly Underwriter*. Vol. 96, No. 3, Jan. 20, 1917, p. 92.
[9] *Puritan Bed Springs Co*. v. *Wolfe*. 120 N. E. 417.
[10] *Brown* v. *New Grand Hotel Company*. *Weekly Underwriter*. Vol. 100, No. 13, March 29, 1919, p. 476.

strain, that this occurrence was not the proximate cause of injury, but injury was due to a chronic condition. The Rhode Island case[1] was somewhat similar in facts and the court held that the theory of lighting up a pre-existing disease goes too far to say that when the severity of an old condition, requiring an operation, is brought home and the necessity of an operation is made apparent that the responsibility rests upon the strain which aggravated the condition.

Another defense against compensating for hernia, as expressed by the Iowa commissioner,[2] relies on the theory that hernia is of gradual development and therefore not an accident.

> "The general compensation view has been and is that in cases where a workman has been performing the service of an able-bodied man and that something in connection with this service actually happens to break him down, promptly produces disability and makes operation necessary, the injury is held to arise out of and in course of employment.
>
> "But it is assumed to be necessary that this disability is not of gradual development, that something out of the ordinary and in connection with his work must have occurred by which the time of such occurrence may be definitely established, that corroboration of an alleged injury through a fellow workman or probable circumstance must be forthcoming."

The same question was a matter of contention in a Michigan case[3] in which it was claimed that hernia was the result of "long continued lifting for a number of months," that it was the result of a very gradual process and therefore not an accident but a disease; to which the court replied that the evidence disclosed that the employee felt a pain in the groin after raising a window and discovered a hernial protuberance immediately afterwards. The award was sustained on the theory that the strain and exertion caused the sudden rupture and not the condition that made him predisposed to such injury.

In Wisconsin, previous to adoption of the amendment covering occupational diseases, the commission held and the state Supreme Court[4] affirmed the decision "that applicant must prove that the accident was such as could produce a hernia; that hernia appeared immediately after the accident." Afterwards the Wisconsin act was amended "to include in addition to accidental injuries all other injuries including occupational

[1] *Napoliatano* v. *Diamond Machine Company. Weekly Underwriter.* Vol. 99, No. 13, Sept. 28, 1918, p. 491.
[2] *Vanos* v. *Waterloo Gasoline Engine Co.* Iowa. Workmen's Compensation Service. 3d Biennial Report, p. 40.
[3] *Bell* v. *Hayes Ionia Company.* 158 N. W. 179.
[4] *Meade* v. *Wisconsin Motor Manufacturing Co.* 168 Wis. 250.

diseases growing out of and incidental to the employment."[1] Following this change in the law the commission has held[2] hernia compensable without proof of accident.

> "To make out a case of hernia now it will be sufficient if the applicant clearly establishes that the hernia was caused by the work he was engaged in. If the applicant proves satisfactorily to the commission that the nature of the work was such as would cause continual and severe strains and intra-abdominal pressure and that such work did produce a hernia, and that there was no outside cause which did produce the hernia, the commission will find that the applicant sustained an injury while performing services growing out of and incidental to his employment and award compensation."

In compensating for occupational diseases, California[3] also has held the occurrence of hernia to be of gradual development. In the Buckbee case where the employee first discovered a hernial protusion while taking his bath, compensation was awarded on the theory that the hernia was the result of lifting heavy articles required in his employment over a number of years.

Notice In Hernia Cases

In states where statutes require that compensable injuries must be the result of accident, the commissions and courts in hernia cases have uniformly insisted on very prompt notice to the employer, of injury, and in this they are more strict than in case of other accidents.

This theory is well stated in a Kentucky case[4] in which a delay of almost two months in giving notice of injury resulted in refusal of the commission to award compensation.

> "In accidents which are alleged to have resulted in hernia—more than in any other cases—it is important that the employer should have notice of the injury as soon as practicable, for the reason that one of the pre-requisites to recovery of compensation for hernia is that the hernia appeared suddenly and immediately following the injury Where hernia has been produced by accident and immediately follows the injury, the employee knows it then as well as he will ever know it It is different with other kinds of injury, which might at first appear trivial and the employee be lulled into inaction by their apparent unimportance."

[1] Laws of 1919. Section 2394–32.

[2] *Dierschke* v. *Meinecke*. Wisconsin. Industrial Commission. 9th Annual Report, p. 35.

[3] *Anderson* v. *Healy-Tibbets Construction Co*. California. Industrial Accident Commission. Decisions. Vol. 6, p. 222.
Buckbee v. *Stark Bros. Weekly Underwriter*. Vol. 94. No. 2, January 8, 1918, p. 42.

[4] *Tolliver* v. *Northeast Coal Company*. Kentucky. Workmen's Compensation Board. Leading Decisions. Vol. 3, p. 64.

In Connecticut,[1] where an employee delayed from March to September in reporting a hernial condition alleged to have resulted from an injury, the failure to give prompt notice prejudiced the employer and prevented him from seeking evidence concerning the occurrence; for which reason compensation was reduced by two-thirds.

In Wisconsin[2] an employee claimed that while pushing a loaded truck he fell and felt a pain. Two weeks later he consulted a doctor who found that he was suffering from a double inguinal hernia and also an umbilical hernia. The commission denied compensation on the theory that if he had suffered these injuries at the time of the fall he would have been immediately disabled from work.

A somewhat different rule was established in Massachusetts, where an employee ruptured himself but felt no pain and did not know of his condition until fifteen days thereafter. He then consulted a physician and was advised to wear a truss, which he did for several days before reporting his condition to the timekeeper. The Massachusetts Supreme Judicial Court[3] held that notice was given as "soon as practical after the happening," since the rupture did not manifest itself immediately and the employer was notified within a reasonable time thereafter.

Likewise in Connecticut[4] where a workman gave notice to his employer of injury to his foot, returned to work after three days' incapacity, and did not realize that he was suffering from hernia until ten days after the accident, the delay in giving the notice of rupture was not a bar to an award for compensation because notice was given as soon as the hernia was discovered.

[1] *Link* v. *Winchester Repeating Arms Co.* *Weekly Underwriter.* Vol. 99, No. 19, Nov. 9, 1918, p. 697.

[2] *Wenzel* v. *Harsh & Edwards Shoe Co.* Wisconsin. Industrial Commission. 8th Annual Report, p. 44.

[3] *In re Brown.* 116 N. E. 897.

[4] *McShera* v. *Aberthaw Construction Co.* *Weekly Underwriter.* Vol. 102, No. 14, April 3, 1920, p. 637.

XXVIII

OCCUPATIONAL DISEASE

From the beginning of workmen's compensation administration, a broad distinction has been made between accidental injury and occupational disease. The accidental injury is considered an unforseen, unexpected event, occurring suddenly, and in some jurisdictions requiring violence to the physical structure of the body, whereas an occupational disease is reasonably to be expected as a natural result of the hazards of the employment and develops gradually. This distinction is emphasized in an Illinois case[1] in which the court said:

> "A disability caused in that way or from that source [occupational disease] is not to be regarded as an accident because such a disease has its inception in the occupation and develops over a long period of time from the nature of the occupation and not from any unusual or unforeseen cause or event."

The English compensation act which served as a model for most of the compensation laws in this country originally excluded compensation for occupational disease. Following this example the compensation acts as originally enacted by the various states in this country, with only one exception, also restricted compensation to accidental injuries. That the general course of legislation has been to deal with industrial accidents as separate and distinct from occupational disease is explained in a Michigan case.[2] It was here held that because the paramount object of the enactment of the compensation laws was to afford a more just and humane remedy for accidental injuries than was afforded by the common law, by removing certain defenses, and inasmuch as under the common law an employee had no right of action for injury or death due to occupational disease, it would seem that occupational diseases were not intended to be included in the compensation acts. The same idea is well expressed in a Connecticut case[3] as follows:

> "Since the common-law action for damages which was founded on the master's negligence, never attempted to cover the typical case of an occupational disease caused by continued exposure to the ordinary and known risks of the

[1] *Matthiessen & Hegeler Zinc Co.* v. *Industrial Board.* 120 N. E. 249.
[2] *Adams* v. *Acme White Lead & Color Works.* 148 N. W. 485.
[3] *Miller* v. *American Steel & Wire Co.* 97 Atlantic 345.

employment, the inference is plain that the alternative compensation scheme was not intended to cover such diseases."

The same Connecticut case, however, expresses the idea that

"It may be said that in point of logic occupational disease is as proper a subject for compensation as industrial accident."

Opinions today are more advanced on this subject than when compensation laws were first enacted and, with the above idea in view, compensation for occupational diseases now has been effected in eight states.[1]

The state of Massachusetts was the first to compensate for occupational disease. Their law, as originally enacted, held the employer liable for all personal injuries arising out of and in the course of employment, the qualifying phrase "by accident" being omitted. In deciding a case of lead poisoning[2] the Supreme Judicial Court interpreted this omission as significant that the element of accident was not intended to be the sole cause for compensation and that occupational diseases were covered by the act.

The Connecticut Supreme Court had denied compensation for occupational diseases until the legislature amended their act[3] as follows:

"If an injury arises out of and in the course of the employment it shall be no bar to a claim for compensation that it cannot be traced to a definite occurrence which can be located in point of time and place."

In another section[4] this provision is recorded:

"The word 'injury' as the same is used in said chapter shall be construed to include any disease which is due to causes peculiar to the occupation and which is not of a contagious, communicable or mental nature."

The California commission compensates for occupational diseases under the clause of their act[5] which specifies that "the term 'injury' as used in this act, shall include any injury or disease arising out of the employment." Likewise the Wisconsin act[6] now makes general provision for occupational disease, covering "in addition to accidental injuries, all injuries, including occupational diseases growing out of and incidental to the employment."

[1]California, Connecticut, Illinois, Massachusetts, Minnesota, New York, Ohio, Wisconsin.
[2]*In re Johnson*. 104 N. E. 735.
[3]Public Acts of 1921, Chap. 306, Sec. 5341.
[4]Public Acts of 1921, Chap. 306, Sec. 5388.
[5]Act of 1917, Sec. 3, Par. 4.
[6]Wisconsin. Workmen's Compensation Act. Sec. 2394–32.

In four states,[1] the legislatures have adopted schedules under which diseases and injuries considered as occupational may be compensated, only such diseases and injuries as are listed therein being covered. These schedules follow:

Illinois

(Section 15a) "The disablement of an employee engaged in occupations covered by Section Two of this Act resulting from an occupational disease arising as a result of the work, labor, manufacture or process referred to in said section two, shall be treated as the happening of an accidental injury within the terms and meaning of the Workmen's Compensation Act."[2]

(Section Two) "Every employer in this State engaged in the carrying on of any process of manufacture or labor in which sugar of lead, white lead, lead chromate, litharge, red lead, arsenate of lead or Paris green are employed, used or handled, or the manufacture of brass or the smelting of lead or zinc which processes and employments are hereby declared to be especially dangerous to the health of the employees engaged in any process of manufacture or labor in which poisonous chemicals, minerals or other substances are used or handled by the employees herein in harmful quantities or under harmful conditions, shall provide for and place at the disposal of the employees engaged in any such process or manufacture and shall maintain in good condition and without cost to the employees, proper working clothing to be kept and used exclusively for such employees while at work, and all employees therein shall be required to use and wear such clothing; and in all processes of manufacture or labor referred to in this section which are unnecessarily productive of noxious or poisonous dusts, adequate and approved respirators shall be furnished and maintained by the employer in good condition and without cost to the employees, and such employees shall use such respirators at all times while engaged in any work necessarily productive of noxious or poisonous dusts."[3]

Minnesota

"(9) For the purpose of this act[4] only the diseases enumerated in column one, following, shall be deemed to be occupational diseases:

Description of disease	*Description of process*
1. Anthrax.	1. Handling of wool, hair, bristles, hides or skins.
2. Lead poisoning or its sequelæ.	2. Any process involving the use of lead or its preparations or compounds.
3. Mercury poisoning or its sequelæ.	3. Any process involving the use of mercury or its preparations or compounds.

[1]Illinois, Minnesota, New York, Ohio.
[2]Smith's Illinois Revised Statutes 1921, Chap. 48, Sec. 87.
[3]Smith's Illinois Revised Statutes 1921, Chap. 48, Sec. 74.
[4]General Laws 1921, Chap. 82, Sec. 67.

Description of disease	*Description of process*
4. Phosphorus poisoning or its sequelæ.	4. Any process involving the use of phosphorus or its preparations or compounds.
5. Arsenic poisoning or its sequelæ.	5. Any process involving the use of arsenic or its preparations or compounds.
6. Poisoning by wood alcohol.	6. Any process involving the use of wood alcohol or any preparations containing wood alcohol.
7. Poisoning by nitro amido-derivatives of benzine (dinitrobenzol, anilin, and others) or its sequelæ.	7. Any process involving the use of nitro or amido-derivatives of benzine or its preparations or compounds.
8. Poisoning by carbon bisulphide or its sequelæ.	8. Any process involving the use of carbon bisulphide or its preparations or compounds.
9. Poisoning by nitrous fumes or its sequelæ.	9. Any process in which nitrous fumes are evolved.
10. Poisoning by nickel carbonyl or its sequelæ.	10. Any process in which nickel carbonyl gas is evolved.
11. Dope poisoning (poisoning by tetrachlor-methane or any substance used as or in conjunction with a solvent for acetate of cellulose) or sequelæ.	11. Any process involving the use of any substance as or in conjunction with a solvent for acetate of cellulose.
12. Poisoning by gonioma kamassi (African boxwood) or its sequelæ.	12. Any process in the manufacture of articles from gonioma kamassi (African boxwood).
13. Chrome ulceration or its sequelæ.	13. Any process involving the use of chromic acid or bichromate of ammonium, potassium, or sodium or their preparations.
14. Epitheliomatous cancer or ulcerations of the skin or of the corneal surface of the eye, due to tar, pitch, bitumen, mineral oil or paraffin, or any compound, product or residue of any of these substances.	14. Handling or use of tar, pitch, bitumen, mineral oil, or paraffin or any compound, product or residue of any of these substances.
15. Glanders.	15. Care or handling of any equine animal or the carcass of any such animal.
16. Compressed air illness or its sequelæ.	16. Any process carried on in compressed air.
17. Ankylostomiasis.	17. Mining.
18. Miner's nystagmus.	18. Mining.
19. Subcutaneous cellulitis of the hand (beat hand).	19. Mining.
20. Subcutaneous cellulitis over the patella (Miner's beat knee).	20. Mining.

Minnesota—*continued*

Description of disease	*Description of process*
21. Acute bursitis over the elbow (Miner's beat elbow).	21. Mining.
22. Inflammation of the synovial lining of the wrist joint and tendon sheaths.	22. Mining.
23. Cataract in glass workers.	23. Processes in the manufacture of glass, involving exposure, glare to molten glass."

New York[1]

"2. Occupational diseases. Compensation shall be payable for disabilities sustained or death incurred by an employee resulting from the following occupational diseases:

Description of disease	*Description of process*
1. Anthrax.	1. Handling of wool, hair, bristles, hides or skins.
2. Lead poisoning or its sequelæ.	2. Any process involving the use of lead or its preparations or compounds.
3. Zinc poisoning or its sequelæ.	3. Any process involving the use of zinc or its preparations or compounds or alloys.
4. Mercury poisoning or its sequelæ.	4. Any process involving the use of mercury or its preparations or compounds.
5. Phosphorus poisoning or its sequelæ.	5. Any process involving the use of phosphorus or its preparations or compounds.
6. Arsenic poisoning or its sequelæ.	6. Any process involving the use of arsenic or its preparations or compounds.
7. Poisoning by wood alcohol.	7. Any process involving the use of wood alcohol or any preparation containing wood alcohol.
8. Poisoning by nitro- and amido-derivatives of benzene (dinitro-benzol, anilin, and others), or its sequelæ.	8. Any process involving the use of a nitro-, hydro- or amido-derivative of benzene or its preparations or compounds.
9. Poisoning by carbon bisulphide or its sequelæ.	9. Any process involving the use of carbon bisulphide or its preparations or compounds.
10. Poisoning by nitrous fumes or its sequelae.	10. Any process in which nitrous fumes are evolved.
11. Poisoning by nickel carbonyl or its sequelæ.	11. Any process in which nickel carbonyl gas is evolved.
12. Dope poisoning (poisoning by tetrachlor-methane or any substance used as or in conjunction with a solvent for acetate of cellulose) or its sequelæ.	12. Any process involving the use of any substance used as or in conjunction with a solvent for acetate of cellulose.

[1]Laws of 1922, Chap. 615, Art. 1, Sec. 3, Par. 2.

Description of disease	*Description of process*
13. Poisoning by formaldehyde and its preparations.	13. Any process involving the use of formaldehyde and its preparations.
14. Chrome ulceration or its sequelæ.	14. Any process involving the use of chromic acid or bichromate of ammonium, potassium or sodium, or their preparations.
15. Epitheliomatous cancer or ulceration of the skin or of the corneal surface of the eye, due to tar, pitch, bitumen, mineral oil or paraffin, or any compound, product or residue of any of these substances.	15. Handling or use of tar, pitch, bitumen, mineral oil or paraffin or any compound, product or residue of any of these substances.
16. Glanders.	16. Care or handling of any equine animal or the carcass of any such animal.
17. Compressed air illness or its sequelæ.	17. Any process carried on in compressed air.
18. Miners' diseases, including only cellulitis, bursitis, ankylostomiasis, tenosynovitis and nystagmus.	18. Any process involving mining.
19. Cataract in glass workers.	19. Processes in the manufacture of glass involving exposure to the glare of molten glass."

OHIO[1]

"The following diseases shall be considered occupational diseases and compensable as such, when contracted by an employee in the course of his employment in which such employee was engaged at any time within twelve months previous to the date of his disablement and due to the nature of any process described therein.

Schedule

Description of disease or injury	*Description of process*
1. Anthrax.	1. Handling of wool, hair, bristles, hides and skins.
2. Glanders.	2. Care of any equine animal suffering from glanders; handling carcass of such animal.
3. Lead poisoning.	3. Any industrial process involving the use of lead or its preparations or compounds.
4. Mercury poisoning.	4. Any industrial process involving the use of mercury or its preparations or compounds.

[1]Workmen's Compensation Act. Sec. 1465–682.

OHIO—*continued*

Description of disease or injury	*Description of process*
5. Phosphorus poisoning.	5. Any industrial process involving the use of phosphrous or its preparations or compounds.
6. Arsenic poisoning.	6. Any industrial process involving the use of arsenic or its preparations or compounds.
7. Poisoning by benzol or by nitro and amido-derivatives of benzol (dinitro-benzol, anilin and others).	7. Any industrial process involving the use of benzol or a nitro- or amido-derivative of benzol or its preparations or compounds.
8. Poisoning by gasoline, benzine, naphtha, or other volatile petroleum products.	8. Any industrial process involving the use of gasoline, benzine, naphtha, or other volatile petroleum products.
9. Poisoning by carbon bisulphide.	9. Any industrial process involving the use of carbon bisulphide or its preparations or compounds.
10. Poisoning by wood alcohol.	10. Any industrial process involving the use of wood alcohol or its preparations.
11. Infection or inflammation of the skin on contact surfaces due to oils, cutting compounds or lubricants, dust, liquids, fumes, gases or vapors.	11. Any industrial process involving the handling or use of oils, cutting compounds or lubricants, or involving contact with dust, liquids, fumes, gases or vapors.
12. Epithelioma cancer or ulceration of the skin or of the corneal surface of the eye due to carbon, pitch, tar or tarry compounds.	12. Handling or industrial use of carbon, pitch or tarry compounds.
13. Compressed air illness.	13. Any industrial process carried on in compressed air.
14. Carbon dioxide poisoning.	14. Any process involving the evolution or resulting in the escape of carbon dioxide.
15. Brass or zinc poisoning.	15. Any process involving the manufacture, founding or refining of brass or the melting or smelting of zinc."

According to Corpus Juris,[1] "An occupation or industrial disease is a disease caused by or specially incident to a particular employment." The same idea is expressed in a New York case[2] which held that:

[1]Treatise on Workmen's Compensation Acts. Section 56.
[2]*Naud* v. *King Sewing Machine Co.* 95 Misc. 676.

"An accidental injury as used in this statute is clearly distinguishable from an injury in the nature of a vocational disease sustained in the course of an employment, where from the inherent nature of the work disease is likely to be contracted."

Thus in Michigan[1] an employee engaged in staining mahogany furniture, which necessitated his continually wetting his hands in the staining solution, became infected from the constant contact with the stain. Compensation was denied because there was no scratch nor abrasion through which the stain entered. The disability was due to a peculiarity of the work and not to accident. On the other hand, in a Pennsylvania case[2] an employee received compensation for infection resulting from his work in staining pianos. In this case the stain entered through a scratch in his hand, and his injury was held an accident. In the former case the disability was occupational and due to the nature of the work itself, while in the latter case the infection was the result of a scratch which may occur in any employment. Likewise, in Michigan,[3] a fireman in extinguishing a fire became drenched and died from pneumonia. The court held death to be the result of an occupational disease as the injury was not traceable to an accident but to conditions incidental to his regular employment, and according to the law compensation could not be allowed. In Colorado[4] a dishwasher was denied compensation for rash on his arms due to contact with sal soda in the dish water, the commission ruling that there was no accident but that the disability was in the nature of an occupational disease.

That the occupational disease must flow as a natural and expected result of the hazards of employment is noted by two Massachusetts cases, where a cigar maker became totally incapacitated for work due to the stooping position in which he worked. In refusing compensation the Supreme Judicial Court[5] said:

"There is not enough in this record to show that the condition of the employee is a necessary result of his work. It arose on all the evidence from a bad posture of the body while at work. This record is bare of any evidence to show that it is a reasonably necessary result of the employment,

[1] *Jermer* v. *Imperial Furniture Co.* 161 N. W. 943.
[2] *Taylor* v. *Lester Piano Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 5, p. 92.
[3] *Landers* v. *City of Muskegon.* 163 N. W. 43.
[4] *Virgil* v. *Davey. Weekly Underwriter.* Vol. 94, No. 14, April 1, 1916, p. 392.
[5] *In re Maggelet.* 116 N. E. 972. Similar ruling *in re Pimental.* 127 N. E. 424.

that those following it should have neurosis, or that the inducing proximate cause of that condition, is the employment."

However, another cigar maker,[1] by reason of his occupation suffered

"neurosis in his hands and arms with consequent inability to use them in making cigars. This condition was brought about by the unusual degree of strain upon certain groups of muscles for a long period of time and by reason of the rapidity with which said employee performed his work as a cigar maker."

The Massachusetts board in the latter case awarded compensation on account of disability due to an occupational disease. The resultant condition was peculiar to the work in which the workman was employed.

Because occupational diseases are the result of continued exposure or are of slow development, they are not compensated when the law requires the injury to be of an accidental nature. Thus, where through continued inhalation of coal dust, an employee developed asthma, the Pennsylvania board[2] refused compensation on the ground that occupational diseases are not included in their act. Quoting from the decision in this case:

"There is here no injury by accident. The asthma was not the result of any particular inhalation of the coal dust but must of necessity have been developed from long continued exposure and physical irritation from the coal dust."

In Wisconsin,[3] the applicant for compensation suffered dermatitis as a result of having to work with cyanide solution for four or five months. The applicant was unable to fix any specific time of the occurrence of the rash; it resulted from the many contacts with the cyanide solution and the disease developed gradually. At the time this case was tried the Wisconsin act did not cover occupational disease and therefore compensation was denied.

Lead poisoning frequently brings on occupational disease but it is of gradual development. In Massachusetts[4] a lead grinder's incapacity was held to be an occupational disease. For twenty years he had been

"absorbing lead poisoning during his occupation, which had been stored up in his system—when, elimination failing, the

[1] *Lee* v. *Alles and Fisher*. Massachusetts. Industrial Accident Board. Workmen's Compensation Cases. Vol. 2, p. 753.
[2] *Schofield* v. *Budd Manufacturing Co*. Pennsylvania. Workmen's Compensation Board Decisions. Vol. 3, p. 102.
[3] *Schoula* v. *Garage Equipment Co*. Wisconsin. Industrial Commission. 7th Annual Report, p. 27.
[4] *In re Johnson*. 104 N. E. 735.

poison stored up manifested itself in the personal injury and incapacity resulting therefrom."

But in Ohio[1] where an employee not a painter was directed temporarily to do some painting and died from inhaling lead poison through fumes and vapors of heating the paint on a stove in a closed room, the court found death to be an "accidental and unforeseen inhaling of a specific volatile poison or gas and not the result of occupational disease."

Sometimes a disease may manifest itself suddenly with serious results but may be traceable to slow infection. In Pennsylvania[2] an employee was accustomed to dip articles into an acid bath and in so doing his hand became suddenly paralyzed. The board found that the paralysis of the nerves was due to long continued exposure to acid fumes, and that such disability was the result of an occupational disease.

In a New York case a photographer's assistant was obliged to dip plates into a developing solution more than five hundred times a day and after many days, on account of the action of the chemicals, a finger became mummified, gangrene set in and amputation was necessary. The Supreme Court held[3] that the loss of the finger was not compensable because the injury was not accidental. "The coming into contact of the hand and the solution was expected and therefore not accidental."

Exposure over a period of five years to a furnace for producing gas, and the inhalation of poisonous gases therefrom, rendered an employee blind. Under the Massachusetts law the board was in position to award compensation in this case[4] although the disability was caused by occupational disease. But in Ohio[5] where the employee became blind from an exposure of more than two years to the constant glare of powerful lights and glittering surfaces of material he had to inspect, compensation was denied because there was no recovery at that time under the Ohio workmen's compensation act for disabilities developing gradually as occupational diseases. It is interesting to note that the court in this case held that the employee's remedy lay in a common law action for damages.

[1] *Industrial Commission* v. *Roth.* 120 N. E. 172.
[2] *Beaton* v. *Herr Machinery Co.* Pennsylvania. Workmen's Compensation Board Decisions. Vol. 1, p. 35.
[3] *Jeffreys* v. *Sager.* 191 N. Y. Supp. 354.
[4] *In re Hurle.* 104 N. E. 336.
[5] *Zajkowski* v. *American Steel & Iron Co.* 258 Fed. 9.

A similar case[1] arose before a Pennsylvania court where long continued straining of the eyes in an unusual position under poor lighting conditions caused nystagmus or "dancing eyes." The disability was defined as an occupational disease, not compensable under the Pennsylvania act.

Continued exposure to drafts, extremes of cold and heat and dust of a malting house for twelve years was given as the reason for the death from tuberculosis of an employee; but because this was in the nature of an occupational disease the Wisconsin commission[2] was unable, at that time, to allow death benefits. Likewise in Nebraska[3] where the employee claimed that his rheumatism was caused by his employment which required exposure to the heat of the boiler room and then exposure to sub-zero temperature in the freezing room of an ice plant, the court denied compensation because the element of accident was missing, and occupational diseases are not covered by the Nebraska statute.

Where the law compensates for accidental injuries, compensation has been refused where the injury is not traceable to a definite time or occurrence, because such injuries partake of an occupational rather than accidental nature. This was the ruling in a Wisconsin case[4] in which the employee was engaged as a sand blaster in smoothing the frames of motorcycles. In the words of the commission:

> "The proof in this case is to the effect that the condition was not brought about at one time, but resulted from frequent inhalations of particles of sand which clogged up the lungs causing sores which became infected by [tubercular] germs. We think this is a clear case of occupational disease."

The same reasoning was used in denying compensation to an employee in a bleachery who became affected with eczema probably due to contact with acids used in his employment. No specific time or occasion could be fixed when the alleged accident happened and the New Jersey Supreme Court[5] accordingly denied compensation for the disability. Likewise the inhaling of fine particles of brass over a period of five weeks, resulting in disability, was held an occupational disease by a

[1] *Poling* v. *Frick Coke Co.* 2 Mackey 154.
[2] *Reitzner* v. *Wisconsin Grain & Malting Co.* Wisconsin. Industrial Commission. 6th Annual Report, p. 21.
[3] *Blair* v. *Omaha Ice & Cold Storage Co.* 165 N. W. 893.
[4] *Konecny* v. *Harley Davidson Motor Co.* Wisconsin. Industrial Commission. 8th Annual Report, p. 23.
[5] *Liondale Bleach, Dye & Paint Works* v. *Riker.* 89 Atlantic 929.

Connecticut commissioner.[1] This was held not to be an accident since there was no incident in the employment in the nature of an unexpected event which could be located as to time and place. In Rhode Island, where the act covers only accidental injuries, a claim for compensation was also denied to an employee who developed neuritis in his hand while punching holes in rubber balls. The Superior Court[2] held that the disability was not due to accident but was a result of continual pressure from punching rubber balls and therefore of the nature of an occupational disease. However, in California where occupational diseases are covered by the law compensation was granted[3] a traffic policeman for flat feet from broken arches resulting from continuous standing.

Bursitis resulting from operating a pressing machine by foot power was defined as an occupational disease by the Maryland commission[4] which said:

> "Even if it be true that the injury was caused by the constant use of a machine, over a long period of time, and the pain came on very suddenly when a sufficient amount of fluid got in the bursa, as [the physician] says might have been the case, then the incapacity of the patient resulted, not from an accident but from occupational disease, for which no compensation can be allowed under our Act."

Hernia, which develops gradually, if the nature of the work is such as would cause "continual and severe strains and intra-abdominal pressure," may be compensated in Wisconsin[5] as an occupational disease, because it was held not necessary to prove the accidental nature of the injury in such cases.

An interesting type of occupational disease is reported from California.[6] A fifteen year old boy employed as a dairyman's helper complained of disability in his hip. The examining physician diagnosed the case as epiphyseal separation of the neck of the left femur, due to innumerable jars caused by the claimant's jumping from the delivery truck. This type of injury was made possible by reason of the incomplete ossifica-

[1] *Caranolli* v. *Magnus Co. Weekly Underwriter.* Vol. 100, No. 23, June 7, 1919, p. 878.

[2] *Alexander* v. *Davol Rubber Co. Weekly Underwriter.* Vol. 98, No. 6, Feb. 9, 1918, p. 196.

[3] *Hedden* v. *City of San Diego.* California. Industrial Accident Commission. Decisions. Vol. 5, p. 1.

[4] *Cohen* v. *Goldman.* Maryland. Industrial Accident Commission. Report of Cases. Vol. 1, p. 186.

[5] *Dierschke* v. *Meinecke.* Wisconsin. Industrial Commission. 9th Annual Report. p. 35.

[6] *Hurd* v. *Crown City Dairy.* California. Industrial Accident Commission. Decisions. Vol. 8, p. 215.

tion of the femur which was characteristic of a person of his age. The commission held that the disability constituted an occupational disease resulting from accumulation of the effects of small traumas and was therefore compensable.

Sometimes a disability ordinarily classified as an occupational disease may occur under conditions which make it an accidental injury. Thus in California a showcard writer who used wood alcohol in an air brush in writing cards practically lost his eyesight from inhaling the poisonous fumes. It developed from the evidence in this case[1] that at the time his eyesight became impaired the employee had been rushed with work and had used more of the alcohol than was his usual custom. In finding the employee's incapacity due to accidental injury, and not to occupational disease as was contended by the insurer, the court held that the injury resulted from conditions which were "unexpected" and "unintentional."

Likewise in Indiana[2] the claimant, who had been a carpenter for nineteen years, developed "housemaid's knee" from being on his knees for a few days while scraping and polishing floors. The Supreme Court held this to be an accidental injury and not an occupational disease, as this was not the regular nature of his work, which consisted of general carpentering and repairing. "Housemaid's knee" suffered by a plumber due to a kneeling posture for a few days was also compensated as a personal injury in Connecticut.[3]

Two workmen used wood alcohol to soften shellac which they were applying to the inside of an empty beer vat. Although apparently well at the end of the day's work, one died the following night and the other became totally blind the next day. The New York board in this case[4] made awards, not for occupational disease but for personal injury by accident. The accident in these cases consisted in the fact that the means of carrying off the fumes of the wood alcohol were inadequate; "these deadly fumes were formed where the ordinary play of the atmosphere could not carry them off."

Caisson disease is usually classified as an occupational disease, since it is peculiar to employments in which the work is con-

[1] *Fidelity & Casualty Co.* v. *Industrial Commission.* 171 Pacific 429.
[2] *Standard Cabinet* v. *Landgrave.* 132 N. E. 661.
[3] *Roberts* v. *Hitchcock.* Connecticut. Compensation Decisions. Vol. 1, p. 213.
[4] *Eichhorn* v. *Kraffmeyer.* New York. Department of Labor. Special Bulletin No. 97, p. 30.

ducted under air pressure. A Michigan decision[1] compensated for a disability of this kind as an accidental injury where, through negligence of a co-employee, the air pressure was released too rapidly and a workman was overcome and died. The employer's contention that death was due to an occupational disease was not sustained. This case was the result of a sudden and unforeseen condition, whereas an occupational disease, according to the court, develops by slow process.

[1] *Williams* v. *Missouri Bridge & Iron Co.* 180 N. W. 357.

XXIX

COMPENSATION AND MEDICAL COST

The records of the various compensation boards and commissions contain much material of value from a scientific, social and economic viewpoint, and form a vast storehouse of information which, if utilized, would contribute in large measure to the solution of the problems which have arisen in connection with the workmen's compensation laws.

It is hardly possible, however, to make comparable analysis of statistics of the various compensation boards and commissions, for the reason that no two states keep records in a comparable manner nor do they summarize their reports according to any standard form. Lack of adequate appropriation is given in many instances as the reason for not compiling and publishing the results of the work of the boards. Yet it is only by an adequate understanding of the cases that have been considered that constructive improvements can be made in existing laws.

As an example of this lack of coordination, the number of accidents is variously reported as "number reported" to the board, "number compensation cases" and "number of settled cases"; all of which figures are derived from different bases. Obviously, a comparison of such material is out of the question.

The International Association of Industrial Accident Boards and Commissions, the national association of workmen's compensation boards, has promulgated and adopted a standardized method of keeping compensation records and analyzing them, but few, if any, states have adopted these standards in their entirety, largely for the reasons already given. Until the experience of the different commissions is brought together and analyzed with constructive policies in view, such improvements as are made in the compensation laws will be brought about by legislative intent rather than as the result of past experience.

It is unfortunate that legislatures do not recognize the value of comprehensive and practical statistics of compensation experience. Such statistics, if available, would form a practical measure of the operation of the law and would point to weaknesses that could be corrected by constructive amendment.

But until the importance of such statistics is realized, the changes that are brought about in the laws will be based on incomplete experience and accompanied by the dangers attendant upon such proceedings.

TABLE 21: COMPENSATION AND MEDICAL EXPENSE UNDER WORKMEN'S COMPENSATION LAWS

(National Industrial Conference Board)

State	Period covered	Compensation expense	Medical expense	Total compensation cost	Per cent medical of total
California	July 1, 1920-June 30, 1921	$3,624,722.00	$2,201,874.00	$5,826,596.00	37.8
Connecticut	Nov. 1, 1918-Oct. 31, 1920	2,692,573.72	1,663,107.08	4,355,680.80	38.2
Georgia	Mar. 1, 1921-Dec. 31, 1921	348,786.51	162,481.56	511,268.07	31.8
Idaho	Nov. 1, 1919-Oct. 31, 1920	586,863.13	70,604.37	657,467.50	10.8
Illinois	1920	8,558,798.00	731,911.00	9,290,709.00	7.9
Iowa	July 1, 1919-June 30, 1920	475,907.89	75,803.86	551,711.75	13.7
Maryland	Nov. 1, 1920-Oct. 31, 1921	1,234,566.96	325,382.70	1,559,949.66	20.8
Massachusetts	July 1, 1919-June 30, 1920	4,658,633.69	1,602,057.74	6,260,691.43	25.6
Minnesota	July 1, 1919-June 30, 1920	1,460,893.00	457,638.04	1,918,531.04	23.9
Montana	July 1, 1918-June 30, 1919	436,568.28	19,441.91	456,010.19	4.3
Nebraska	1920	402,780.94	137,432.14	540,213.08	25.5
North Dakota	July 1, 1920-June 30, 1921	281,513.33	50,540.94	332,054.27	15.3
Oklahoma	Sept. 1, 1917-Aug. 31, 1918	456,988.88	210,776.24	667,765.12	31.6
Oregon	July 1, 1918-June 30, 1919	1,562,631.23	196,850.07	1,759,481.30	11.2
Rhode Island	1919	153,736.07	149,424.78	303,160.85	49.4
South Dakota	July 1, 1920-June 30, 1921	91,519.10	41,125.12	132,644.22	31.0
Washington	Oct. 1, 1919-Sept. 30, 1920	2,623,027.82	108,988.28	2,732,016.10	4.0
West Virginia	July 1, 1916-June 30, 1917	1,321,432.15	117,170.29	1,438,602.44	8.1
Wisconsin	July 1, 1920-June 30, 1921	2,361,845.00	668,455.00	3,030,300.00	22.1
Wyoming	1920	232,293.74	8,707.83	241,001.57	3.6

With a full realization of the shortcomings of compensation statistics as noted above, Table 21 is presented as showing the amount of compensation and medical expense reported by certain states. These figures are not comparable as to the period of time to which they refer, but are given rather as instances of the ratio of medical expense to compensation payments that prevail in certain states.

Insurance rating bureaus advise that the medical expense of operating the compensation law averages approximately 15% of the total compensation. This varies in different states. The experience of Pennsylvania for the years 1916 and 1918 shows that 23% of the total compensation cost was attributable to medical services[1]. This percentage in New York is said to average about 15.

While the medical costs may seem in some instances to be high in relation to the amount of compensation paid, it is realized by both employers and insurance carriers that an increased medical cost, provided it represents an increasing quality of medical service, is a measure of economy as it will cut down the amount of compensation paid.

[1]U. S. Bureau of Labor Statistics. Bulletin No. 276, 1920, p. 82.

XXX

SUMMARY

The enactment of workmen's compensation laws, while in the nature of an experiment in social legislation, has undoubtedly produced results of value to both employers and workers. The laws' provisions, whereby a portion of the burden of the injury is carried by the injured worker,[1] make him realize his responsibility under the statute, and while employers are obligated to care for each injury occurring to workers while in their employ, they are generally agreed that the operation of the law is a distinct advance over the older liability statutes which preceded the enactment of the compensation laws.

From the beginning, medical questions have been among the most important of all questions involved in the administration of these laws. In many cases, however, they have been given but scant consideration. Even today after the experience of a decade in the operation of these laws, only fifteen of the forty-two states with workmen's compensation laws have physicians attached to the administering board in any official capacity other than that of examining or impartial physicians who render opinions on the physical condition of the claimant. Such physicians have no authority to consider other questions relating to the case. In half of the states having medical departments the medical advisor devotes only a portion of his time to this work. In only one state is a physician a member of the administrative board.

Further evidence of the difficulties resulting from non-participation of medical experience in the formulation and administration of these laws is seen in the lack of uniformity in the anatomical limitations and descriptive medical terms employed in this work, all of which make for confusion and misunderstandings.

Owing to the employer's direct financial interest and responsibility in the case, the selection of the physician to treat his injured employees rests in his hands in a majority of the states. There has been and now is agitation in certain quarters on the

[1]Compensation has never exceeded two-thirds of injured worker's wages.

part of employees and the medical profession to permit free choice of physician to treat compensation cases. Attempts have been made to meet this demand and yet safeguard the practice, in California, by permitting a change of physicians when the injured worker is dissatisfied with the treatment being received, and in Wisconsin by the submitting of a panel of physicians by the employer from which his workers may choose in case of injury. The reasons underlying the legal provision whereby the employer is made responsible for the medical service to his injured workmen are set forth in decisions rendered in Texas and Wisconsin.

Compensation boards are almost unanimous in their requirements that regularly licensed medical practitioners only shall be permitted to treat the cases. In Colorado and Wisconsin, however, other forms of healing are recognized under limitations.

In some localities, notably in the large industrial cities, there is a tendency for a physician or a group of physicians to specialize in so-called "compensation practice." This tendency is looked upon unfavorably by many private practitioners as an attempt to commercialize medical practice. Without endorsing this practice, it must be remembered that the enactment of workment's compensation laws effected a radical change in the conception of medical practice in that, in several states, it took away from the private practitioner one of his oldest prerogatives, that of privileged communication between physician and patient, and also introduced a new element into the situation—an economic element which must be considered in all cases. The economic problems involved are of primary importance in that the cost of compensation is in direct proportion to the type of injury received and the character of treatment given.

The time during which medical service must be supplied to the injured workman and the amount of fees which the physician can collect for such service are being extended in the light of further experience. When these laws were first enacted, the time and amount of medical service provided for were very much less than at the present time; a number of states have now removed all limitations regarding these two elements. In this connection, it is realized by employers, insurance carriers and compensation boards and commissions that a high type of medical service is the least expensive in the end, both for em-

ployer and employee as such service reduces the length of disability.

Likewise the tendency in the different compensation states is to reduce the period, known as the waiting period, following the injury during which no compensation is paid. In some cases this waiting period has been placed at three days and in others it extends to two weeks. In the majority of states, however, the usual period is one week and in most states this is compensated for if incapacity extends for a definite subsequent period, usually from four to six weeks.

This study has shown that in the law of only one state, New Mexico, is there provision for the physical examination of workers at the time of entering employment or thereafter, before an injury occurs. Practically all the laws provide for the examination of injured workers. The decisions of boards and courts show that the employment of sub-standard workmen without physical examination results many times in large compensation payments which would have been avoided had physical examinations been required at the time of employment. Refusal of employees to submit to examination or treatment, and delay or negligence in the treatment of their injuries is generally penalized by withholding or forfeiting compensation.

In general, the theory of compensation for industrial injuries is based on the reduced earning power of the injured workman, but in practically all the states having compensation laws, specific awards are given for injuries totally or partially incapacitating workers. These awards are either for a definite portion of the wage for a definite period, or take the form of a lump sum payment to the injured party. While these schedules are in general accord in the various states, wide variations are found in them and in no state does the schedule of awards for partial disability or dismemberment approach that recommended by the International Association of Industrial Accident Boards and Commissions,[1] which has had a committee of experts working on these problems for many years.

In some states the amount of compensation granted in permanent disability cases, partial in character, has been based upon the remaining possibilities for useful work on the part of the injured party, rather than on his ability to continue in his previous employment, the courts holding that because a man

[1]U. S. Bureau of Labor Statistics. Bulletin 276, December, 1920, p. 18.

may be incapacitated from following his usual employment, it does not, of necessity, follow that he is incapacitated for all employment. On the other hand, some of the states consider the previous employment alone and base compensation upon the disability connected therewith.

This study also shows that the estimation of defects of vision due to injury is in a badly confused state, primarily because there are no generally recognized standards by which this form of disability can be measured. Numerous tables have been constructed for the estimation of percentage loss of vision as indicated by readings on the Snellen test chart, but no two of these tables are in agreement. Inasmuch as ophthalmologists are not in accord in the interpretation of the Snellen readings, the compensation boards have been unable to adopt any general standard for measuring these defects in terms of compensation. There is need of such an agreement, first between the different members of the medical profession, and next between the medical profession and the compensation commissions. At the last meeting of the International Association of Industrial Accident Boards and Commissions held in Baltimore, Maryland, in October, 1922, steps were taken looking to the formation of a committee representing the medical profession and compensation commissions for the purpose of developing a uniform standard for the estimation of visual defects following injury.

Legal provisions and decisions of commissions and courts on compensation for injuries to an already defective worker, when the former injury occurred in a previous occupation, are not in harmony throughout the various states. In some cases the employer in whose service the last injury occurred is responsible for the same and also for the incapacity due to the different defects, while in other jurisdictions the last employer is responsible only for the injury occurring in his employ. In still other instances the workman is given compensation in keeping with his total incapacity, the employer being charged with the amount payable for the injury occurring in his employ, the remaining portion being derived from a special state fund maintained for this purpose by assessments upon employers for a certain amount in all cases of fatal accident in which there are no dependents to which compensation would rightfully go.

In the experience of different jurisdictions the awards for dis-

figurement are based either on the loss of earning capacity or the unsightly appearance of the disfigured worker.

Compensation for diseases resulting from accident and for the aggravation of diseases latent in the body, as distinguished from diseases due primarily to occupation, seems to be increasingly the rule. In several of the states, diseased conditions which follow after the occurrence of an accident have been compensated, although the causal relation between the two is not clearly indicated. While compensation for diseases due to occupation is awarded in several states, the law in a number of states also denies compensation for diseases of any sort. In three of the states recognizing the validity of claims for injury due to occupational diseases, the diseases which will be compensated have been definitely listed, and in these states claims have been denied because the disease for which compensation was asked did not fall within the legal classification, although it was definitely due to the occupation.

As workers become better acquainted with the legal provisions covering compensation, claims are made for the results of injuries and diseased conditions more and more remote from direct connection with employment. Decisions in many such cases have been rendered without due consideration of the medical problems involved. Compensation boards and commissions, in administering the law, often render their decisions upon social and theoretical grounds rather than in the light of the results of practical medical experience with such cases.

In the consideration of hernia or rupture due to occupation, the commissions and courts are divided as to the responsibility. In a number of states the laws, and rules of the commissions which have the effect of law, stipulate conditions under which compensation will be paid for hernia, and the proof of the occurrence of hernia during employment is always placed upon the claimant. These stipulations seem to be becoming more strict in the light of experience in dealing with these cases. During recent years the extensive investigations of hernia which have been made among industrial workers have served as a basis for the assertion that hernia, when it does occur in industry, should be classed as a disease, rather than as an injury. The rare cases of true traumatic hernia should, of course, be excepted from this classification; but they are so few compared to the large number

of the other type mentioned, that they are relatively unimportant.

Comparable records of the experience of the different compensation boards is impossible to obtain, valuable as such information would be. In several of the states legislatures have failed to appropriate sufficient funds to permit of any extended analysis of the records accumulated in the administration of the law. For this reason, in the majority of instances such improvements and amendments as have been made to the laws have been brought about by legislative intent rather than as the result of past experience. The records of these boards and commissions contain a wealth of material bearing upon social and economic problems of great importance to industry and a comprehensive and practical analysis of such material would go far toward the solution of some of the more pressing problems of this kind. The International Association of Industrial Accident Boards and Commissions, almost from its organization, has had a committee of industrial experts and statisticians working upon standardized forms for reporting the experience of the different boards and methods of analyzing such records. Owing to financial stringency and legislative restrictions, few, if any, of the commissions are able to assemble their records after the recommended fashion, and until the importance of this work is realized by legislative authorities, a vast amount of useful information will be withheld from service.

To sum up, it may be said that while workmen's compensation laws, for the first time in the experience of social legislation, have charged one group with the major responsibility for injuries occurring to another group, the principle embodied in this legislation has been accepted by both interested parties, in the main, as a just one. Differences appear, but they are not of sufficient importance to cast doubt on the value of the work as a whole. As the physician is intimately concerned with every compensation case, medical opinion is entitled to receive greater consideration in the administration of these laws than has been the case in the past. From his training and experience he is the most capable of an adequate understanding of these questions. While progress has been made, much remains to be done to administer these laws so as to realize their full social and economic value.

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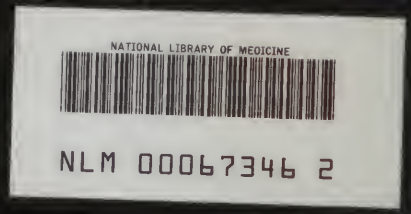
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